REPORT RESUMES

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HEALTH OCCUPATIONS EDUCATION CENTERS, REPORT OF A SEMINAR (JULY 11-14, 1966).

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ONE HUNDRED THIRTY-SIX VOCATIONAL EDUCATION SUPERVISORS, ADMINISTRATORS, TEACHERS, REPRESENTATIVES OF PROFESSIONAL ASSOCIATIONS, AND STAFF MEMBERS OF THE LABOR DEPARTMENT AND DEPARTMENT OF HEALTH, EDUCATION AND WELFARE ATTENDED A NATIONAL SEMINAR DESIGNED TO ASSIST LEADERS IN THE EDUCATIONAL AND HEALTH COMMUNITIES TO CONSIDER THE CONCEPT OF CENTERS FOR HEALTH OCCUPATIONS EDUCATION. THIS APPROACH TO EDUCATION FOR DIVERSE CAREERS IN THE HEALTH SERVICES RECOGNIZES THAT SOME COMMON UNDERSTANDINGS ARE REQUIRED BY ALL HEALTH WORKERS, THAT INTERDISCIPLINARY TEACHING IS POSSIBLE, THAT CENTRALIZED EQUIPMENT AND SERVICES COULD BE AVAILABLE TO ALL THE STUDENTS, AND THAT THE EDUCATIONAL EFFORT COULD BE IN A SETTING WHICH PERCEIVES THE RELATIONSHIP AMONG THE VARIOUS KINDS OF PREPARATION RATHER THAN THE SEPARATENESS OF EACH COURSE. STRUCTURED AROUND PRESENTATIONS BY LEADERS WHO HAD ALREADY BEGUN TO EXPLORE OR ORGANIZE CENTERS, THE PROGRAM INCLUDED DISCUSSION OF THE PHYSICAL CHARACTERISTICS OF A CENTER, REGIONAL PLANNING, PUBLIC RELATIONS, RESEARCH, POTENTIALS FOR BETTER TEACHING METHODS, TEACHER TRAINING, AND CONTROL OF PROGRAM QUALITY. DISCUSSION GROUPS RECOMMENDED THE DEVELOPMENT OF HEALTH OCCUPATIONS EDUCATION CENTERS TO PROMOTE EDUCATION IN AN AREA OF GREAT NEED, INCREASE THE PUBLIC'S KNOWLEDGE ABOUT TRAINING AND EMPLOYMENT OPPORTUNITIES, POOL PROFESSIONAL TALENT, AND WELD TOGETHER PROFESSIONAL AND NONPROFESSIONAL INTERESTS. OTHER RECOMMENDATIONS WERE TO DEVELOP GUIDELINES FOR CENTER DEVELOPMENT, DISSEMINATE RESEARCH AND CURRICULUM MATERIALS, AND HOLD BIENNIAL FOLLOWUP MEETINGS. PRESENTATIONS OF CONFERENCE SPEAKERS ARE INCLUDED. (JK)

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HEALTH OCCUPATIONS EDUCATION CENTERS

THE CENTER FOR VOCATIONAL AND TECHNICAL EDUCATION
THE OHIO STATE UNIVERSITY
980 KINNEAR ROAD
COLUMBUS, OHIO 43212

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The Center for Vocational and Technical Education has been established as an independent unit on The Ohio State University campus with a grant from the Division of Adult and Vocational Research, U. S. Office of Education. It serves a catalytic role in establishing a consortium to focus on relevant problems in vocational and technical education. The Center is comprehensive in its commitment and responsibility, multidisciplinary in its approach, and interinstitutional in its program.

The major objectives of The Center follow:

1. To provide continuing reappraisal of the role and function of vocational and technical education in our democratic society;

2. To stimulate and strengthen state, regional, and national programs of applied research and development directed toward the solution of pressing problems in vocational and technical education;

3. To encourage the development of research to improve vocational and technical education in institutions of higher education and other appropriate settings;

4. To conduct research studies directed toward the development of new knowledge and new applications of existing knowledge in vocational and technical education;

5. To upgrade vocational education leadership (state supervisors, teacher educators, research specialists, and others) through an advanced study and in-service education program;

6. To provide a national information retrieval, storage, and dissemination system for vocational and technical education linked with the Educational Research Information Center located in the U. S. Office of Education;

7. To provide educational opportunities for individuals contemplating foreign assignments and for leaders from other countries responsible for leadership in vocational and technical education.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Research Series, No. 9

HEALTH OCCUPATIONS EDUCATION CENTERS

Report of a Seminar Held

July 11-14, 1966

Compiled by

Grace L. Nangle

October, 1967

The Work Presented Or Reported Herein Was Performed Pursuant To A Grant From The U. S. Office Of Education, Department Of Health, Education & Welfare.

The Center for Vocational
and Technical Education
980 Kinnear Road
Columbus, Ohio 43212

THE SEMINAR ON HEALTH OCCUPATIONS EDUCATION CENTERS

Held July 11-14, 1966 at the Edgewater Beach Hotel, Chicago, Illinois.

Sponsored by The Center for Vocational and Technical Education, The Ohio State University, Columbus, Ohio in conjunction with the U. S. Office of Education.

Preface

Health services in the United States face an increasing challenge. The most affluent country in the world does not have enough health technicians and other personnel to meet present demands and to provide services which will be inaugurated under recent social and health legislation.

To meet national health care needs, we must train ten thousand more health workers monthly until 1970. New and better programs must be designed to provide needed educational opportunities to produce these workers.

In July 1966, the Health Occupations Education Centers Seminar was held in Chicago. The Seminar was designed to assist state leadership personnel to promote, establish, enlarge, and modernize programs of training and education to prepare manpower for the health services.

This publication is the outcome of that seminar. Herein are presented the ideas and concepts of prominant educators and employers in the health services. They diagram models of Health Occupations Education Centers--the facilities, the staffing and in-service and pre-service training, the advisory committee, the public relations.

We are especially indebted to Grace Nangle for chairing the project for The Center and for giving her time for this project away from her post as the Senior Supervisor, Bureau of Vocational and Technical Education, Massachusetts Department of Education, and to Walter J. Markham, Director of Vocational Education, Massachusetts for granting Miss Nangle leave of absence.

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ACKNOWLEDGEMENTS

It is with deep gratitude that The Center for Vocational and Technical Education at The Ohio State University, acknowledges the contributions of the National Planning Committe which met on April 19 and 20, 1966 at The Center in Columbus, Ohio, to plan the theme and program of the Seminar on Centers for Health Occupations Education. These outstanding leaders from various areas of education and from health associations throughout the country, welded together the format of what grew to be an exciting and informative seminar. Their expertise, enthusiasm and unstinting encouragement assisted greatly in developing this first national seminar on health occupations education.

Without the local planning committee, chaired by Mr. Joseph Rhea, Chairman, Executive Director, Health Careers, Health Council of Illinois, Chicago, Illinois, it would have been almost impossible for The Center in Columbus to have arranged for the seminar in Chicago. The details of all local arrangements were handled by this committee, and the staff at The Center is very grateful to these committee members.

Particular thanks also goes to Mrs. Frances Glee Saunders, Field Representative, Health Occupations, Division of Vocational and Technical Education, Department of Health Education and Welfare, Regional Office, Chicago, Illinois, and members of her clerical staff who handled registration details and who thoughtfully provided the seminar speakers and registrants with all necessary equipment and conveniences. Miss Helen Powers, Chief, Health Occupations Unit, Bureau of Adult and Vocational Education, U. S. Office of Education, Washington, D. C. and Mrs. Orieanna Syphax, Supervisor, Health Occupations Unit, Bureau of Adult and Vocational Education, U. S. Office of Education, Washington, D. C. offered encouragement and advice throughout the weeks of preparation, without which the seminar could not have taken place.

Those of us in the field of supervision and education in health occupations especially appreciate the dedication of Dr. Robert E. Taylor, who made it the concern of The Center to initiate the first national seminar on centers for health occupations education. This was a long event, only possible because The Center included this area of education among its other efforts to improve the nation wide educational leadership in the vocational-technical field.

To all who helped with generosity of word and spirit, my sincere appreciation.

Grace L. Nangle,
Consultant

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FORWARD

Background and Purpose of the Seminar

The seminar was planned to assist leaders in the educational and health communities to consider the concept of centers for health occupations education, as an efficient administrative pattern for the education of technicians and training of other workers for employment in the health services.

The seminar was cognate of the pressure for adequate staffing in agencies and institutions expected to implement recent social and health legislation, and the demands of people of a variety of ages and abilities for either career preparation or short term occupational training. Within this setting the seminar was concerned with shortages in health services manpower and the problems of developing educational centers which would provide adequate opportunities for educational programs concerned with manpower for the supportive services for care of the sick and maintenance of health.

Definition of the Center for Health Occupations Education

What is the concept of a center for health occupations education? Essentially the concept involves the administration of education for diverse careers in the health services, in such a way that the approach recognizes that common understandings are required by all health workers, that interdisciplinary teaching is possible, that centralized equipment and services (guidance, health, library) are made available to all the students and that the educational effort is in a setting which perceives the relationships among the various kinds of preparation for these workers, rather than the separateness of each course within the center. The center may be located in one physical structure; it may be a regional focus for preparation of personnel for health services; or it may be a group of satellite or extended campuses which are administered by one agency for the mutual strengthening of all learning experiences.

Program

The seminar was scheduled to allow time for both private and small group discussion, and was structured around the presentations of papers by leaders in the health and educational fields who have already begun to explore or organize such centers.

Registrants

One hundred thirty-six people from 33 states and the District of Columbia registered for this seminar. Included in this number were supervisors in state bureaus of vocational education who are responsible for supervising programs in health occupations, administrators and teachers in junior colleges, local directors of technical institutes and vocational schools, representatives of some of the health professional associations, and staff members from both the U. S. Department of Health, Education, and Welfare and the U. S. Department of Labor.

Topics

The following topics were considered within the seminar, and evolve around the description of the center as given above:

1. What are the best methods of analyzing the needs of an area or region in terms of potential employment?
2. What are the essential elements and decisions to be faced in planning such a center?
3. What are the desirable physical characteristics of a center--(e.g., space requirements, flexibility of use, portable equipment, etc.)?
4. What are the implications for the need of overall community planning, or regional planning, among members of the educational and health communities?
5. How can the importance of good public relations be recognized and integrated into the activities of a center?
6. How can more research be organized and accomplished at such a center?

7. What potentials does the center have for better teaching methods, better teacher-training, and better control of the quality of programs?

These subjects and others are covered in the presentation of speakers included in Section Two of this report. The recommendations which may be summarized from the group discussions are:

1. The concept of a health occupations education center should be developed in order to:

    * halt the wastage of human resources by promoting education in the area of great need

    * increase the public's knowledge and information about the total range of training and employment opportunities in the health field

    * pool professional talent and provide a stimulating climate for faculty members

    * avoid unnecessary duplication of effort

    * economize in facilities and staff

    * develop the team concept in the health field by welding together professional and non-professional interests.

2. Coordinate effort at all levels, local, state and federal and improve communication.

3. Develop guidelines for the organization and administration of health occupations education centers.

4. Disseminate research information about health occupations education more effectively.

5. Make more outlines available; publish curriculum materials.

6. Hold follow-up biennial seminars and meetings.

7. Conduct regional seminars in the biennium between national meetings.

It would appear that some of these recommendations place emphasis on local and regional action which should follow this seminar, while others request assistance and action from The Center for Vocational and Technical Education and the U. S. Office of Education.

At the conclusion of the seminar, agreement was reached that action must be forthcoming from the community up to the federal level to implement the plans and suggestions coming out of this seminar and to meet the needs of the citizens for better education for the health services.

REMARKS

by

Dr. Grant Venn

The future of our country, and indeed, the world, lies not in material wealth, natural resources or changing technology, but in the young people and especially the well educated and prepared younger generation.

The idealism and "need to give" which young people possess, must be continually called upon. The Peace Corps is an example of the harvesting of this highly motivated activity of the younger generation. Service to the sick could also provide a challenge and outlet to this altruism.

We don't need a crystal ball to know some things about the future. Exactly what things will be like 50 years from now is the deepest kind of mystery. But, in general terms we surely know that the world of 2016 will be as different from this one as 1966 is from the time when our great-grandfathers were young. We don't know --but we can predict--that at least 16 years of formal education will be as much the standard of achievement then as 12 years is today. As for today, it is certain that the preparation for an occupation plays about the same role in our society as the three R's played in Jefferson's time.

Young people today do not have the same opportunities we had--or more especially as our fathers had--to gain such vocational preparation informally. They must come to the educators for this knowledge and preparatory skill.

When we were an agricultural nation, nearly all youngsters were assets, trained or not. Now, the untrained youngster is our greatest liability. And yet, those of us who are the educators--the college-trained specialists--find ourselves far better equipped to tell a high school student how to get into Harvard than we are to tell him how to get a job as a bag boy in a supermarket or as a nurses aide in the hospital.

Unfortunately, we can't even brag that we are at least sending our brightest boys and girls on to college, assuming we should. In actual fact, we are sending to college those who have certain geographical, economic and cultural advantages, those with the highest aspirations and those with the most highly-motivated parents--not necessarily those with the greatest amount of ability to excel in the professions requiring college training.

We owe the future a better deal than it is getting from us; that much is certain.

All young people should receive occupational education, as part of their total education. The traditional patterns of in-service education for workers in the health services are changing, and the newly emerging occupations should be taught in organized curricula in education agencies with related work and laboratory experience.

There should be variety in levels and involvement. All levels of education must assume responsibility for preparing health manpower. These would range from pre-technical programs at the high school level, to occupational training for some youth at the high school level. Then there should be technical level programs in community colleges and technical institutes.

This implies that there needs to be a well organized effort to provide sufficient well prepared teachers to instruct youth and adults in these programs.

The geographical placement of all of these programs is important, and consideration should be given to having these within distance for students and near clinical agencies which are involved in the educational process.

In addition to basic preparatory programs, educators have the responsibility to provide more continuing education for people already employed in the health services. As the requirements and skills needed within the occupation change, it becomes more and more necessary for programs of continuing study to be available for these employees.

The closeness of the educational system to the world of occupational opportunity is extremely necessary. The school must take the responsibility to assist students in locating suitable positions in the health services. The guidance effort of the schools is necessary on a long term basis, so it must be up to date in occupational information, and must be usable by the returning drop-out or the graduate who wishes to obtain such information.

REMARKS*

by

William H. Stewart, M.D.

I am sorry that conditions beyond our control have made it impossible for the Public Health Service to be represented in person, but I am pleased to have this chance to address you by remote control. I assure you that we are with you in spirit.

The subject of health manpower has been one of my principal preoccupations since long before I became Surgeon General last fall. It is a very complicated subject--partly because the health of people is a complicated affair, and partly because the capability of modern medicine has grown much faster than has our capacity to adjust training programs and patterns of using health manpower.

It is also a subject of compelling importance. A number of events in the past few years indicate that manpower problems are finally being given the priority they deserve.

Several of these events have been legislative. Since 1963 the Public Health Service has been able to help support the expansion of the Nation's resources for educating health professionals, and to provide funds for loans and scholarships which are broadening our base of recruitment into the health professions. During this same period, educational and training programs covering much wider fields than health alone have been giving greater proportional attention to the potential of the health industry.

Other events rich in promise include a rapidly increasing number of truly inter-disciplinary meetings such as the one you are conducting in Chicago. Health people, education people, labor people and others are meeting face to face, sharing ideas, pooling strengths. Our own close and strengthening liaison with the Office of Education is one example out of many.

Most recently, President Johnson has appointed a National Advisory Commission on Health Manpower, made up of outstanding men and women in health, education and other fields, and asked this group to recommend bold, imaginative ways to "...improve the utilization of health manpower...and speed up the education of doctors and other highly trained health personnel without sacrificing the highest quality of learning."

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*Delievered by "tele-lecture" to National Conference on Concepts of Centers for Health Occupations, Chicago, Ill., July 11, 1966, 3:10 p.m. EDT.

Thus we are in the early stages of a powerful new movement intended to build a health manpower resource that can deliver the health care the American people need and deserve. Let me give you, very briefly, a few of my ideas as to how this new movement should be conceived and directed.

The first requirement is that we conceive of health manpower as a coherent totality. We need to see clearly the relevance of one health discipline to another. We need to be constantly aware of the relationships among all of them.

Historically, we in the health field have not been notably successful in conceptualizing and acting upon this idea of totality and relevance. Each health profession and supporting discipline has "just growed." It has considered itself an autonomous kingdom governing itself by its own rules. It has been preoccupied with building walls around a particular chunk of previously unoccupied territory and defending it fiercely.

We can no longer afford this medieval approach--neither economically nor more (important) in terms of meeting the demand for health services.

Therefore the need for a unifying concept of health manpower. And the logical--in fact the inevitable--uniting factor is the health needs of the people we serve. The health professions and supporting disciplines are mutually relevant only as they relate to delivering care to people.

Acceptance of this concept will compel us to accept many corollary blessings--adding up to a major revolution in the preparation and utilization of health manpower. Among these are:

First, the need for core curricula--concept envisioned in the Health Occupations Centers you are discussing today. These core curricula in turn must be related to the professional schools--medicine and others--with whom the graduates will be working.

Second, the need for occupational mobility--both lateral among the various disciplines according to local demand and individual interest, and vertical so that each man or woman working in the health field has the opportunity to render service up to his maximum capability.

Third, the need for downward transfer of functions--so that every physician uses his time and energy in performing those tasks for which he is uniquely qualified, delegating to others those functions which they can perform as well (or better) than he. This "downward transfer" is really an "upward assumption of increasing responsibility" by health technicians.

Fourth, the need for making education a continuing process in the health disciplines. For a long time we have paid lip-service to the idea of lifetime learning. But relatively few act upon it, and the opportunities for acting upon it are not too plentiful. If we achieve genuine mobility and upward assumption of responsibility, however, the need for continuing education--or continuous education--will be imperative. This will make the "Health Occupation Centers" still more necessary and valuable. It will add another dimension to their function. And at the same time it will underscore the need for close relationships with professional schools.

There is a tendency in meetings of this kind to "overkill the subject of need," as Frank Keppel has said. All of us are generally aware of overwhelming and rapidly growing needs for health manpower. These needs are being generated by societal factors of which I will list a few and belabor none--population growth, changing age composition, rising educational levels, increased awareness of the importance of health care, better financial capability for meeting health care needs, and--within medicine itself--the greatly increased capability of medicine, at its best, for treating and curing people. All of these are self-explanatory. They add up to a tremendously increased effective demand for care.

Until recently, however, we have not gone beyond sounding a general alarm. Now we are able to list, with some certainty, specific categories of most urgent need. Preliminary results of a survey now underway in the Nation's short-term general hospitals indicate the need for large numbers of professional nurses, practical nurses, nurse aides, attendants and orderlies, medical technologists, and numerous other supporting categories. There is no question that the demand for such personnel is very great today, and that it can only grow in the years ahead.

One of the most hopeful signs in the health manpower field is the involvement of vocational schools and other educational agencies in this broadening out of the training of health manpower. To appeal to young people today, training programs need the sanction of the school setting. We look forward to still broader and more vigorous participation by vocational educators, community by community and state by state.

For our part, it is the responsibility of the Public Health Service and the health professions generally to involve ourselves with you in planning and helping to develop educational programs that are truly tailored to meet the health needs of the American people. In addition, we in the health professions have the responsibility to make sure that the people you train are well and productively used.

We in the Public Health Service are deeply committed to fulfilling these responsibilities. We look forward to many more fruitful associations with you. Both the many thousands we train and the many millions whom they will serve will benefit from this partnership.

SYMPOSIUM - CONCEPT OF CENTER FOR HEALTH OCCUPATIONS EDUCATION

REMARKS

by

P. W. Seagren

I can remember all too clearly the reactions that took place when I resigned as dean of boys in one of the larger Miami high schools to assume the responsibility of developing a vocational trade school. My supervisor indicated that I was making a grave mistake to step down and move into the vocational division.

After serving as principal for a period of time, I realized that his statement was true. In meeting with my fellow principals, I felt that I was living on the other side of the tracks and for the past thirty years, I have been struggling on local, state, and more recently, on national level, to assist my associates in correcting this problem.

We, in vocational education, started to come into our own following the publications by Dr. Conant which was greatly assisted by the late President Kennedy's report issued by a panel of consultants headed by General Superintendent Ben Willis of Chicago. This has resulted in the enactment of several laws in recent years and has permitted local and state boards of education to start to expand vocational and technical education. Concurrently, there has been a very important expansion in the area of junior and community colleges. Because of this rapid expansion there has been a lot of confusion as to what part the junior college should play by way of training in the skilled areas and what is the proper place for the vocational and technical programs.

In the State of Florida there has been a rush in some of our counties in an attempt to get all vocational education under the control of the junior colleges so all federal funds would be allocated to the junior college. This was reviewed very carefully at our last legislature. It was my privilege to testify before the joint committees of the House and the Senate on education. As a result of this special session, an amendment was passed whereby allocation of funds would be made direct to area vocational schools in the vocational division, which by law now must be entirely separate from junior colleges.

In order not to be misunderstood, I would like to hasten to add that in our county , we are very fortunate in that we have a coordinating committee that reviews all new courses. We sit down with officials from the junior college along with members of our vocational staff and we determine which division can best serve the need for this new course. This obviously avoids duplication and we both profit by this arrangement. In the case of the health occupations, we are taking the short terminal courses and are directing our attention to placement of trainees on the skilled and semi-skilled levels which enable them to become employed in a matter of weeks and months rather than on a two-year basis. The more technical and higher level courses are referred to our junior college as far as Miami and Dade County are concerned.

Clarification as to which institution--Lindsey Hopkins Education Center or Miami Dade Junior College--will handle the program is made possible by clearing proposed courses in health occupations with our advisory committee.

Since preparing this presentation, an incident occurred involving our junior college and the vocational program which is definite proof as to how these advisory committees and our coordinating committee function. We received a request from the superintendent stating that we were to meet with officials of the junior college for the purpose of establishing an aircraft and power plant training program for the junior college, to be located at our aviation school. We first met with officials of the junior college and members of our staff and were unable to come to any conclusions as to whether the proposed program was justified or was an overlapping of training programs.

It was my suggestion that the junior college officials meet with our aviation advisory committee. When the men from the airlines and the overhaul shops outlined their needs, it appeared that the proposed training program at the junior college level for aircraft and power plant mechanics would not fit into their employment needs since it would be on a level that would amount to about 1 percent of their total of new personnel employed in this area. As a result, the junior college has decided to drop the project and continue with their pilot training program only.

I think it would be of interest to this group to have a little background as to how some of these health programs got underway in the Greater Miami area. I feel that the most unique program in the health occupations area is our dental clinic.

At the close of World War II, a dentist, a fellow Kiwanian, came to me and stated that they were in need of help and asked if there was any way the vocational division could help to upgrade the dentists. My first answer was no, since he was talking about the college level type of training. After several meetings, however, with this dentist and other members of the Greater Miami Dental Society, I was asked if we could offer training for dental assistants and dental technicians if they would take care of their own training program, and this we could do.

A notice was sent out to all the dentists in the Greater Miami area and this occurred at a time when you had to wait three months for an appointment with a dentist. Much to my surprise, 150 dentists reported to the meeting. When the story was related to them, a motion was made to organize a dental research clinic. At the close of the meeting each dentist paid $25 and through proper legal procedures, a dental research clinic was organized. We took the money and purchased used equipment, mostly was surplus, and the dental research clinic signed it over to the Board of Public Instruction.

The welfare patients are referred to the clinic through Metro Government and Metro has set up a special fund to take care of the costs. The dentists in each study group donate one day a month. The chairman of each study group acts in the capacity of an instructor. He serves for a period of one year. If satisfactory, he is reappointed for another year. He serves without salary.

We have two instructors who are retired dentists to carry on the program for the dental assistants who must be high school graduates and meet certain prerequisites. A group of 28 girls enters the program each fall on August 1. They have 30 days for orientation and briefing. The clinic here opens after Labor Day and continues until the end of May. The President of the Research Clinic presents the caps and pins at graduation. We have enjoyed 100 percent placement, almost since the beginning.

The advantage of this type of training is that it is not pseudo training. A great many programs throughout the country who are training dental assistants do it without actual patients. Because these trainees work at chairside with the dentists, the transition from the school to the dentists' offices is done with ease.

In addition to training dental assistants, we have two laboratories in which training is offered for dental technicians. This course involves 2320 hours which is approximately 18 months of full-time training. We have a waiting list for this course, and again, we enjoy 100 percent placement.

In vocational education, we work very closely with advisory committees. The Board of Directors of the Dental Research Clinic is my advisory committee.

The fees collected from Metro Government total approximately $28,000. This is set up in a special schedule whereby materials used on welfare patients are charged off and a percentage is set aside for replacement for equipment. The equipment that you had an opportunity to see yesterday is new and modern and is paid for entirely from the fees, not by tax money.

PICTURE OUTLINE

1. Lindsey-Hopkins Building
2. Dental Clinic Laboratory--Specific
3. Dental Clinic Laboratory--General
4. Dental Technicians Laboratory
5. Dental Technicians Laboratory--Demonstration
6. Dental Clinic Science Laboratory
   (Dental Assistants and Dental Technicians
7. Practical Nurse Facility
8. Massage Lecture Room
9. Special Feature
10. Program Learning Laboratory
11. Proposed Plans--Health Education Center

12. 1st Floor--Registration Department
Guidance Department
Auditorium or Two Classrooms

13. 2nd Floor--Administration Offices
Purchasing Department
Payroll Department

14. 3rd Floor--Practical Nursing Laboratories
Practical Nursing Classrooms
Nurse Aide

15. 4th Floor--Dental Mechanics Laboratory
Dental Assistants Laboratory
Dental Research Clinic

16. 5th Floor--Dietary and Laboratory
Distributive Education Laboratory
Surgical Technical Assistant Laboratory

17. 6th Floor--Cosmetology Laboratory
Certified Laboratory Assistant Laboratory
Classrooms

18. 7th Floor--Massage Laboratory
Physical Therapy Laboratory
Classrooms

19. 8th Floor--Library-Learning Resource Center
Classrooms

HEALTH EDUCATION CENTERS - A COMMUNITY JUNIOR COLLEGE VIEW

by

Kenneth G. Skaggs

It has been made clear to all of us that the purpose of this symposium is to explore the concept of a center for education for the Health Occupations. The speakers who have come before me on this program, and who will follow me, are experienced in their profession and in its educational requirements and obligations, are wise in their approach to a new concept, and sound in their reviews and recommendations. Now, as an exercise in creative development, and as a change from the very high plane set by the others, will you join me in some thinking that may take us into the by-ways and little trodden paths of exploration into this matter of the health education center.

First, we must accept and envelope change as a natural part of our thinking, provocative, dynamic, challenging, and abrupt change. In his recent book, Change and Challenge in American Education, Dr. James E. Russell makes these challenging and arresting statements: "We live in a world swept by the winds of change, but we have not learned yet to understand what change is or what it does....The world is now changing in such radical fashion as even to challenge our concept of what education is. We are moving into a new world whose outlines we perceive dimly or not at all. Yet this new world will reconstruct everything we do."

For your own thinking and consideration, and as a kind of backdrop to the main theme of our discussion today, let me quote from several of our nation's outstanding leaders in addresses made to the annual convention of the American Association of Junior Colleges in St. Louis last March:

Dr. Fred E. Crossland of the Ford Foundation speaks of today's college youth, that young person who is being ardently recruited to enter our health and medical education programs: "Consider the youth of eighteen today, the young person now knocking on your college door. He was born in 1948. At the start of the twenty-first century, he will be fifty-two years of age. According to life expectancy tables, he will probably be living in the year 2020....just a little bit more than fifty years from now. If all of us would serve him today, we must have twenty-twenty vision."

If any high school senior is in doubt today whether or not he should continue his education, Mr. Paul F. Lorenz, Vice-president of the Ford Motor Company, would tell him quickly that he faces a very unflattering proposition: He says, "As Secretary of Labor Willard W. Wirtz recently put it: The machine (the sophisticated "hardware" of computerization) now has a high school education in the sense that it can do most jobs that a high school graduate can do, so machines will get the jobs because they can work for less than a living wage. A person today needs at least fourteen years of education just to compete with the machine."

The use of computers in the health and medical field is, of course, already known. How long it will be until we shall go to our doctor's office and communicate only with the computers and the paramedical technicians, I cannot say, but such medical relationships may be closer to us than we think. Dr. Robert Kinsinger describes a student who receives practice in diagnosis by means of a teaching computer:

"The student asks the computer: COUGH?

Yes, developed yesterday.

BACKACHE?

No.

HEART EXAM?

Not enlarged to percussion but low-grade systolic murmur at apex. Otherwise normal.

ABDOMINAL EXAM?

Diffusely tender, splinting noticed in right quandrant and occasionally radiating to right flank area.

THE GRIPPE?

There's insufficient evidence for a diagnosis at this time. You're not being careful."

...and the student continues his questioning of the machine until a satisfactory diagnosis is made. Now while this machine acts as a patient giving answers leading to medical diagnosis, how long will it be before it receives the answers to questions and suggests possible diagnosis itself?

Tremendous strides are being made in medical and health research. The work of the medical student in our colleges of medicine is far different from that in years gone by. In my grandfather's day, there were practicing physicians who actually had but little schooling, and in my father's early days, medical students frequently went directly from high school graduation to medical school. Few nurses received anything like the normal amount of training expected now, and most of the people on duty in hospitals received their training through "experience." The mid-wife and the so-called "home nurse" were important and busy people in any community. Paramedical personnel were unknown as we would identify them today.

Even the diseases and accidents of our people have changed during the decades just past, thus focusing the medical and health concerns in new directions and bringing about vast changes in the education of phsycians, surgeons, nurses, and paramedical personnel. Tuberculosis, pneumonia, and diabetes are no longer the killers they at one time were. Accidents were the "farm" variety for the most part. Today our illnesses are increasingly resulting from the pressures and tensions of the environments we have created, and accidents from the speeds generated by a new age of machines and transportation. Too, better diagnosis, better knowledge as the result of research, has identified illnesses and organic conditions long hidden to the medical man. All of these changes and new directions have had an impact and an influence upon educational programs, and the kind of people now needed to care for the health needs of society. "Preventive medicine" is being talked about more and more, but to be successfully explored, the field of preventive medicine requires increasing paramedical support.

Second, if we then will recognize and accept change, we must, if we are to make progress for a new world and a new time, destroy the mystiques and the shibboleths of past and, too often, current thinking. Education in our country has grown through the years as layers of educational opportunity, compartmentalized and departmentalized and carefully arranged in levels of course offerings. Neatly packaged time elements of semesters, hours, periods, "required" weeks of study, and grades determine the curriculum, the program, and the speed at which students learn...or do not learn. From the elementary school to the junior high school goes the student, in most cases proceeding to a new building, with new procedures and its own set of sacred cows to worship. Then, of course, the high school, aloof and superior, awaits for the student in its much larger setting, its well defined curriculum, its various programs, too often tightly organized, inflexible, parochial in nature...woe to the student who wants to make any changes or modifications! Now the student is faced with a steep climb into another level, that of post high school education, the four year college, the community junior college, the university, the post high school vocational education center, each saying, "Here I am...if you choose me, you must forsake all others."

My proposition to you today is that our nation, our society, cannot afford the expensive and wasteful luxury of this kind of separate, disparate planning for the educational programs desperately necessary in the world of tomorrow morning. There must be some new concept, some new ideas, some new formation that will knit education together, provide a totally integrated whole, coordinate the programs planned into one comprehensive educational effort.

And the health education center can be that new concept. If we can lead the way in the health, medical, and paramedical areas, we will have broken the bindings of restrictive thinking in education, and educational opportunity for our people will become more than just a propagandizing catchword.

What would such a health education center cost? Here is the opportunity for stretching our creativeness to the fullest extent! Well, first, it can coordinate all programs and curriculums for health education, from the high school with its few such training programs, coordinating these closely with the vocational education center, focusing these somewhat higher level programs upon those providing semi-professional and technician personnel in the paramedical programs of the junior colleges, and, finally, providing the support and encouragement to those students able to proceed to university level programs so necessary to provide us with the needed professional, supervisory, and research personnel. Not only would the health education center articulate, coordinate, and evaluate all such programs, it would determine through its advisory council on the appropriateness of health programs to the level of education best organized to offer it. Some programs would be assigned to high school and vocational center levels of skill and competency preparation, some would be considered most appropriate to the junior college level, with its more sophisticated curriculum, and its "college level" emphasis, and some would be obviously appropriate only to the university level.

Second, the health education center would provide the strong and continuing means of communication among the professions, the educational community, and the public. It would provide public information, it would constantly provide services to counseling and guidance personnel on all levels, and actively engage in proper and realistic recruitment of students. It would be a central clearing house faculty, staff, and administrative personnel placement in the health and paramedical fields.

Third, the health education center would not be just an office or an agency existing more in principle or theory than fact--it would be a physical plant, large enough to be the "extended" campus for a number of institutions, providing the laboratories, the classrooms, the audio-visual areas, the professional library, the offices for faculty and staff, the specialized and general equipment and teaching tools and supplies for all the educational institutions in the area it would serve. At one and the same time, it would be an extended campus of the high school, the vocational center, the community junior college, and the university. All would contribute to it; all would draw from it. "And the lion and the lamb shall lie down together." And why not? Aren't we in education, just as you in the health professions, purportedly the most reasonable, the most adaptable, the most forward-looking members of society? High school students, college students, university graduates, all on the same campus? Why not? What is sacred any longer about age, or level? Such a plan would represent a great community effort for meeting the most pressing, the most desperate, and, at times, the most tragic of society's needs.

Fourth, the health education center would, more than any other kind of institution I know, provide a way to make the "open-ended" curriculum, the ladder concept of education, really possible in the health areas. Let me discuss this important concept in brief detail. At the present time, there is a long standing, built-in restrictiveness in educational programs, more visible, perhaps, in occupational programs than in some others...the various levels of education and the institutions representing them do not do much articulation of endeavor and efforts...not too much real talking goes on among them. Let me give you an example: A young person enters the practical nurse education program on the vocational level, and while receiving education there discovers a growing and developing talent and motivation. Means can be found to proceed beyond the practical nurse level. Can this be done now without sacrificing the time, money and learning already a factor?

In very few institutions or from very few levels of education, if any. But let us think for just a moment: Why isn't it reasonable that this student be able to go directly into the associate degree nursing program on the junior college level without penalty? Or from the associate degree program to the university baccalaureate degree program? We realize that several curriculum adjustments must be made, but shouldn't it be possible for this continuation of education to be realized for able and developing students? The ladder of progression in education should be possible. We like to call this the open-ended curriculum, and we believe it will aid immeasurably in removing the restrictiveness of the educational program that today frustrates and discourages students from entering occupational programs. Mobility of movement in educational programs should be horizontal as well as vertical, with flexibility and adaptability an underlying principle.

How would such health education centers be organized? What areas would they serve? My own belief is that there could be such a center for metropolitan areas, or regions, or, perhaps, in relation to population, even a state center. However, one emphatic principle of education today is that geographic proximity of educational opportunity to centers of population is necessary, for no longer is there a student age limit on any level of education. Education for this world of tomorrow morning is for all people; it is to serve the needs of people, not the ages of people. Therefore, it would seem reasonable that these centers would be developed and placed in as many locations as need and clusters of educational institutions dictate. How would they be financed? Now, I suppose it is time for me to come back into the world of grim reality. However, there could be public financing on the same basis as any other educational institution, either through support now given to established institutions which would contribute a pro-rated cost, or directly through a presently established educational board, or through a newly created board. Of course, special grants or foundation funds could play an important part in initial financing.

Finally, when you get right down to it, almost every objection of educational institutions for the "extended" campus idea of the health education center can be met on the grounds of reason, logic, necessity, and sound accomplishment. Most objections will come from those who are more concerned about "prestige," "status," and exact definitions of "high school" level, "vocational" level, and "collegiate" level than they are with the demands and the needs of a new age, a new

HEALTH OCCUPATIONS EDUCATION CENTERS

Report of a Seminar Held

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SYNTHESIZING OPPORTUNITIES FOR HEALTH OCCUPATIONS EDUCATION AND NATIONAL NEEDS FOR HEALTH MANPOWER

people, a new world. The advisory council of the center, made up, hopefully, of people from medical and health professions and agencies, representatives from the educational institutions that make up the Center, and forward-looking laymen, must assume responsibility for proper and acceptable quality control of programs for preserving the administrative integrity of the educational institutions conceived and the institutions' prerogative to supervise the programs for which they are responsible, and for continual high quality of service and maintenance of the Center.

Seeds for such an operation as I've described, perhaps not quite so broad in intent, have already been planted at the University of Minnesota Health Center, the Wichita, Kansas, Health Education Center, the University of Alabama Allied Health Center, and elsewhere.

HEALTH OCCUPATIONS EDUCATION

THE UNIVERSITY'S ROLE

by

Robert C. Hardin, M.D.

Health Occupations Education must be of concern to the University. There are both retrospective and prospective reasons why this is so. Faculties of health science schools and colleges have of necessity based their curricula on service programs and much of their teaching is done by sharing the care of a patient with a student. Thus the two roles of teacher and deliverer of health care are intertwined and inseparable. A concern for the needs of society grows naturally from this circumstance.

Historically, the health science colleges have played a greater role in meeting community service needs than has the rest of the university. Now, however, there is an ever increasing involvement of the whole university with the everyday life of society and with government at all levels. Many writers have commented upon this fact and there is general acceptance that such a role is proper for the university. Prospectively, then, we can expect that the health science colleges will assume more responsibility in many service functions including the delivery of health care.

Health care delivery is becoming very complex. Dr. Ward Darly has spoken often of what he calls the "inevitables." These are things which have happened or will happen and will affect all of us in the health field. Several of these are pertinent to this discussion. Experience teaches that demand for health care will increase. It is certain also that our fund of scientific knowledge will be augmented. On these two inevitables rests the most perplexing health problem of our day. We must find a means of translating the potential benefits of our store of new knowledge into delivered benefits which our society demands and should have. The design of systems to accomplish this is very much the business of a university.

One concept of value in approaching this problem is that of the health care team. The joining together of several persons with varying skills and knowledge potentiates the effectiveness of each. It is clear that workers in health occupations will have a most important role in such teams.

What should the university do in Health Occupations Education? If one accepts the idea that health care will be delivered by teams, the task of training individual workers must be faced. It is improbable that the numbers required can be produced by universities alone. These institutions traditionally teach dentists, nurses, pharmacists, physicians, physical therapists, occupational therapists and technologists of various kinds requiring education to the baccalaureate level. Obviously, this process must continue, but other members of the team will be needed in such numbers as to recommend their training in the many community colleges and technical schools being developed in the country. The role of the university should be supporting.

Experienced educators on the faculties of health science schools and colleges of education can do much to aid in the design and development of curricular for various programs. This kind of centralized planning will give some basis for integration of team effort as well as expert advice to those responsible for the programs. The preparation of teachers is an obvious task for the university. Many will be needed with education beyond the bachelor's degree. The university may also wish to become involved in continuation study for teachers in health occupations education so that new materials and knowledge may be disseminated.

In selected instances, universities might establish training programs as models and demonstrations. These could be operated for a limited number of years and would serve a second purpose. There will be some research needed into the design of health care teams and into the kind of people needed as well as the specific role of each. Such studies would be proper in the university setting. Another facet of the relationships between members of the team which needs study is how to train them to work together. Probably, this will require both research and demonstration.

In short, the university has always had an interest in all facets of preparation of persons for work in health care. This is now a part of the increasing concern of the university with community life. The university cannot be the sole producer of health workers, but will play a supportive role by helping to determine society's health care needs, health care teams, by construction of curricular to train team members, by training teachers to instruct them and by establishing models and demonstrations.

CONCEPTS OF A CENTER FOR HEALTH OCCUPATIONS

by

Walter J. Markham

I have been assigned the task of summarizing the ideas of the other speakers on this panel and to indicate the place of the state director of vocational and technical education in the concept of a center for the education and the training of people for employment in health occupations.

At the outset of my remarks, I must emphasize that no two states can be exactly alike doing the same things in the same way and at the same time, in the preparation of people for employment. Laws, rules and regulations vary from state to state. Consequently, what would seem to be an ideal situation in one state may have a difficult time being implemented in the same way in another state.

Furthermore, there has been a very large turnover in the state director positions in the past few years. More than 50 percent of all state directors of vocational education have not been in their positions five years.

In addition to these new directors, the older ones have had little experience in the development of total health occupations programs. Some states have developed a few programs for practical nurse training. Very few have expanded their efforts into other areas of training such as dental assistants, medical secretaries, operating room technicians, physiotherapy assistants and others. No matter what has been done, only a small beginning has been made in filling the needs.

You must remember that state directors are men who have been trained and worked in some specialized vocational or technical field. Several are from vocational agriculture. This along with the economy of each state has determined what programs got the greatest attention. No director is a product of any health service.

Therefore, it will be up to you people who are most vitally concerned with the needs to train people for these health occupations to convince the directors to do more about your problems. You will not have as much trouble in convincing the state and local directors of vocational education as you will in trying to convince the general educator that centers and programs must be developed. There are still some of the general educators who firmly believe that preparations for life's work, *per se*, has no place in public education. They still believe that the so-called general education prepares people for anything, yes, for anything, but work.

It is most amazing that less than one (1) percent of all federal monies spent in 1965 for vocatinal education was spent for the health occupations programs, yet, health occupations make up more than five (5) percent of all employment in our country. I would recommend that by 1975 at least ten (10) percent of the federal funds should be expended for health occupational training, because of the great need in this most important and expanding area of employment.

We know that many of our hospitals are under-staffed. I know of one state hospital in Massachusetts that has not been able to utilize three floors of space because help in not available to staff them.

We have too many people being graduated from out high school with no saleable skills--in any field--and especially in the field of health occupations.

Here we come face to face with the old "status" idea that vocational education and the idea of preparing while in high school to go to work is not the thing to be done. One of our panel members, Phil Seagren, made specific reference to this in his presentation.

All people in education who are really interested in the welfare of our country and in people as a whole should get together, admit that there is so much to be done to give proper education and training to all and agree to stop fighting as to who is going to do it, and get the job done.

On this panel we have heard from an expert in secondary education, Kenneth Vordenberg; in adult education, Philip Seagren; in junior community college education, Kenneth Skaggs; and in collegiate and university education, Robert Hardin, M. D., each in his own area specifically pointed out what should and ought to be done in establishing a center for the training of people for the health occupations.

Secondary education is the place where students can study and be studied in preparation for entry into employment, for entrance into advanced study, and for technical and professional employment in the health occupations. You will note, I said, be studied. This area is a must in present day education and training. Guidance counselors, more and more, have to realize that not all students can, should, or will go to college. Greater emphasis must be placed in the vocational aspect of guidance. The counselors will have to get out of the "cubby hole" of the guidance "sanctum sanctorum," visit industries, hospitals, clinics, and every place where those under their care and guidance are going to work. The idea of studying each and every child, his desires, capabilities, abilities, economic situation, cannot be too strongly stressed. If this is done, many high school "drop-outs" will be prevented. It will be possible to identify those who even under the best of circumstances will leave before graduation, and these must be given an opportunity to be prepared to do something.

Curricula, especially for the health occupations, must be developed which will have in them basic education and training that will help to prepare each student to enter into and/or advance in any segment of these fields of endeavor.

High schools must recognize that there are many positions in the health fields that are not of a technical nature. Adequate education and training can be given in high schools to prepare those who want and need this type of preparation for immediate entrance into employment. It is not necessary to list all of the jobs that would fall in this category.

The question arises, when should vocational education start. Cincinnati has made a good start in the study of this. Others, no doubt, have also. It should be the job of someone, maybe a research project under P.L. 88-210 - 4.C. money, to coordinate and publicize these efforts.

Last summer at the M.I.T. Study on Vocational and Technical Education, it became the consensus of those in the study group that general vocational education should be a continuing thing from the first grade, that vocational education and training programs should be started no later than the seventh grade and that the stage of specialization in a specific occupation could start at the 10th or 11th grade with provisions for continuing such specialities in to the 13th - 14th grades for technical preparation and beyond for professional.

Post-secondary programs, the technical institutes, the community and junior colleges and the extension of the vocational education programs into this area of education and training have not had too much implementation as yet. If the vocational educational people had not done what they have done, nothing would have been done.

As the community colleges moved into this area of training, it will be well for them to take a real hard look at what they will offer in relation to the competency needs of the positions in which the graduates will work. There is no sense in stretching a course that is now being very successful in meeting the competency needs for employment in specific job classification in a one-year program to be a two-year program in order that an A.A. degree may be awarded. Many times, the student selects the course of one year for economic, education or other considerations. In plain words, the student needs to get to work as soon as possible. After all, if the job needs can be filled in a short program, why prolong the stay in school.

There will be many courses in the field for students who can well profit by a two-year program, if this length of time can be justified by the competency needs of the job and the advice of the advisory committees. The advisory committee should be a strong factor in helping to determine the total program for each area of instruction. But, here, caution must be stressed because each member of an advisory committee will in many instances have selfish motives for his advice and counsel.

The community college should make great progress in the development of the A.D. registered nurse program. Each state again will have varying rules and regulations due to state administration of the examination procedures for registered nurses. No school can act in isolation in its training.

Then, as we move into the collegiate level of education and training for the health occupations, the emphasis changes somewhat from specific preparation for employment into areas such as research, curricula development, teacher-training, pilot programs, workshops for upgrading, regional conferences on mutual problems involving health occupational training, e.g. It can be hoped that in the field of research, a real study would be made to determine the strengths and weaknesses of the five-year, the four-year, the three-year, and the two-year programs leading to certification as registered nurses. Actually, again going back to an earlier observation about the competency needs for the registered nurse, if the four-year degree program professes to train the degree recipients for some special phase or area of responsibility in the hospital, it should be so stated and distinction made between these responsibilities and those of the two-year graduate and not name both registered nurses with the same ideas for responsibility.

Again, for example, it is hoped that in the field of teacher-training for the health occupations that the higher education people would insist that there will be prescribed practical experiences in working situations to prepare the teachers to be fully competent to teach, not leave all the training to books and laboratories.

At this point we come to the question and reason why we are here to discuss centers for health occupational training that would take cognizance of all these factors that have been mentioned by the panelists. We are here to discuss what these centers are to be.

I am particularly pleased that so many different interests in the health fields are represented here at this conference. Too often, as educators, we find ourselves talking to each other and getting no place. I have high hopes for the results of this conference.

As I said in the beginning, each state is different. I have my problems. In Massachusetts, we have at least one center of training for the health occupations. We know this needs refinement. How will we do this? We hope to get ideas from this conference.

We are also engaged in a large program of the development of regional vocational technical schools. We are already committing more than one hundred million dollars ($100,000,000.00) for these in the present ten years, 1963-1973.

One five million dollar school opened September 1965. It is now considering an addition for the training of people for health occupations. The director of that school is here to ascertain what direction he should take to develop the center to meet the needs of his region.

In the health occupations training, we have had an opportunity to learn a little in the training of adults through our Manpower Development Training Classes. This will help some.

The development of centers will take money. I am sure if we search long and hard enough we can find the money to do much of what needs to be done.

The colleges definitely are old hands at finding funds from the federal government, from foundations. Vocational funds may be made available for some of the programs.

In most states the state director has the responsibility of recommending the use of the federal funds for vocational education in his state. He can be a most important person in getting the funds for these centers.

In Massachusetts we were able to receive a grant of $3,043,000 toward helping to build a $5,200,000 regional school from the provision of P.L. 89-136, The Economic Development Act. No other state to my knowledge received such a grant. In this regional school we are planning a center for training in health occupations. What we are going to do has been basically planned. We may get ideas from this conference that would help us to do what we are planning in a better way.

There is so much to be done, money will have to be found to do it. There is absolutely no sense in any section of the educational structure to claim it has prior rights on all of various facets. The secondary, the post-secondary, the adult, the collegiate sections must work together to help each state establish the formats that will work best in each.

The state directors will be most interested in the results and recommendations that will come out of this conference. I assure you that they will appreciate the efforts being expended here and I, for one, will try to take advantage of all the good things I know will come from it.

COMPONENTS OF THE "MODEL" CENTER FOR HEALTH OCCUPATIONS EDUCATION

ADVISORY COMMITTEES AND PUBLIC RELATIONS

by

Mrs. Teresina B. Thompson

IMPLICATIONS OF THE GROWING DEMAND FOR HEALTH CARE SERVICES TODAY has brought about an alarming concern in our American Way of Life. Medical care costs are rising rapidly and are predicted going "sky high." When we read that the total health-care bill of the United States in 1965 came to thirty-seven billion... 10 times what it was in 1929 and three times what it was in 1949, we gasp at the astronomical implications of total health care spending. Next to defense and education, health care has become the most expensive service the American public buys.

Recent years have witnessed a SHIFT OF HEALTH CARE SERVICES from home and the old time general practitioner, a "do-it-yourselfer," to modern hospital care centers. Enormous expansion of health care services has increased the need for more medical scientists, more professionals, added para-medical and technical groups to support these health service staffs. Not surprising to learn now is that health service is already our second largest occupational group, topped only by teachers. Thus we now look upon the physician of 1966 as primarily the "conductor" of a team--a team that opens new horizons for health careers.

With the IMPACT OF HEALTH CARE NEEDS a new frontier of training opportunities opens its door to a variety of careers. Already identified is the need for trained workers. Our challenge then is for implementation of a PLAN FOR ACTION. Occupational competency can only be developed in an educational climate that recognizes the diversified interests, aptitudes and needs of all youth. The combined efforts of every high school, vocational school, junior college, technical institute, universities and colleges are ALL needed for this task.

Our focus of attention at this point is upon ADVISORY COMMITTEES, self-classified as the LIFE-LINE for successful instructional health care programs. Providing a LINK between SCHOOL AND COMMUNITY RESOURCES has been the purpose of advisory committees for many years. Vocational educators have long benefitted from the vital role played by members of the advisory team. The growth and expansion of our trade and technical education programs has escalated the necessity for close contact, advice and frequent consultation with our community leaders. How better can we identify patterns for change, current manpower needs or pulsate the beat of our complex society than to seek assistance from qualified representatives of the community?

HEALTH CARE NEEDS now toll the bells for immediate ACTION! Educators are more and more concerned with initiating, adding or supplementing courses of instruction that will train the multitude of workers needed to join hands with the health team. Community participation is vital and provides direct lines of communication which is essential to all educational programs.

Although limited in purpose to giving advice and making recommendations, the advisory committee serves as a tower of strength in the ultimate success of its goals and objectives. Selection of key personnel, interested, experienced in their specialty, visionary, respected and dedicated to service, will insure a committee of workers ready to interpret today's needs in terms of tomorrow's obsolescence.

To penetrate the busy world of the medical profession is not an easy task. To seek out spare time from a schedule already overburdened with long hours of work can be rather perplexing. However, when challenged with meaningful goals and objectives a request for assistance will seldom be turned down. Some of our busiest and most well-known professional people have donated time and service to launch the health service occupational programs at the Springfield Technical Institute. More significantly, too,--without any thought or suggestion of financial reimbursement. In return for this service, it is expected that organization and utilization of committee time and effort will be directed with optimum efficiency.

It would be difficult to establish a set of rules and regulations for the operation of advisory committees which would serve as a pattern for the entire country. Each committee and each school will have special needs and distinctive ways in which these needs can be worked out. However, some generalizations can be made. Some of the BASIC PROCEDURES which have proved effective are listed herein as guidelines.

1. The school administrator must KNOW THE POWER STRUCTURE of his community.
   (Facts, resources, feelings, opinions)
   He must understand the climate and all the important environmental factors affecting the people of the community. Important, too, will be his ability to COMMUNICATE

in an intelligent manner. With this information, it is then possible to follow with........................

2. Selection of key representatives for the advisory team

   members may include representatives of medical, dental or professional groups, professional organizations, hospital or other affiliating agencies, community health councils, guidance counselors, supportive labor and management groups, faculty representatives, school alumni and a representative of the lay public. Exact number of members to be included on an advisory committee varies with the size of the committee and the nature of the program served. A working committee should not be so large that it becomes cumbersome to work with. Area or regional schools may require larger numbers necessitated by adequate geographical representation.

   I would specifically recommend that before electing anyone to an advisory committee that an invitation be given to visit the school facilities and meet school personnel. This will provide an excellent opportunity to evaluate personality, enthusiasm, interest, and support which may be forthcoming if elected to committee membership.

3. Functions of the Advisory Committee

   Provides a two-way system of communication between school and the community.
   Has no administrative or legislative authority.
   May advise, recommend on such matters as determining objectives, policies, community surveys, program planning, training need, curriculum, teacher qualifications, equipment purchase, instructional materials, standards for certification, placement and promoting good public relations.

4. Meetings

   No generally accepted policy, however, it is advisable to keep number of meetings to a minimum. A clear understanding of the role each committee member has to perform will be necessary as well as an understanding of his responsibilities to the school, the philosophy and general policies of the city, state and federal government.

   Members should also be familiar with the school facilities and the specific objectives of the training program.

5. Membership
Preferable to limit term of membership. Usually 1 to 3 years. Rotating terms will inject "new blood" with new ideas, concepts and enthusiasm. This will help to educate an increasing number of people with respect to the specific school program. It is expected that each appointment to serve on an advisory committee will be with the approval of the school administrator.

6. Notification and Reports of Meetings
Early notice of meeting date and items for discussion should be included in the letter advising committee members of time, place and purpose of meeting. Readiness for the meeting is important. An agenda is prepared with identification of subject areas to be discussed at the meeting. A pertinent, concise summary of discussion points including recommendations and conclusions should be recorded and a report mailed to each committee member not later than one week following meeting date.

7. Follow-Up of Meetings
It is important that a report of action on suggested changes and recommendations be made to committee members since this will develop a sense of personal contribution, pride and achievement.

8. Patterns for Change
It is the school administrator's responsiblity to keep attuned to certain factors which may be hindering the progress and effectiveness of committee action. Attendance, lack of interest, attitudes and apathy toward change may prove to be decided stumbling blocks for progress. In cases of this kind the school administrator should again take the initiative to follow the course of action which best serves the school.

9. Publicity and Service Recognition
The whole process of educational planning, development and improvement is based upon the know-how in dealing with people and maintenance of good public relations. Thus appreciation, respect and praise for the valuable contribution made by advisory committee members is a MUST. Various techniques of recognition may be used. Committee members may be invited to special school functions, luncheons, dinners or banquets. Invite competent members to speak at school assemblies or present special awards. The names of members may appear in school publications, catalogs, brochures,

publicity releases to newspapers and other news media. Never minimize the importance of good publicity to enhance sound educational programs. The public needs to be kept informed. Specifically, health service occupations have a personal appeal as everyone is or should be concerned with the development of life lines leading to a HEALTHIER PURSUIT OF HAPPINESS.

BUILDING PUBLIC RELATIONS and SPARKING COMMUNITY ACTION

Effective advisory committees can also render tremendous service to the educational system by keeping the public well informed. Interpretation of occupational goals along with the philosophy of vocational and technical education will gain understanding and support among the people of the community. An enthusiastic and well-informed public not only helps to build school prestige but will also re-emphasize the fact that the function of the school and its educational leaders is to SERVE THE PUBLIC.

One of the best techniques for group motivation and community action is to provide the information and understanding necessary for group effort and team work. If the health needs of the nation are to be cared for we must provide better lines of COMMUNICATION, develop ATTITUDES necessary for motivation, cooperation and the DESIRE to participate. In addition, we must develop the ....

SKILL TO WORK

THE WILL TO WORK

and

TEAMWORK

Our educational leaders cannot be relieved of this obligation and responsibility for initiating, sparking and maintaining good public relations. We may look upon this responsibility as a CHAIN OF LINKS, one joined with the other to strengthen the total spectrum of performance.

First, is the responsibility to SCHOOL PERSONNEL. There should be no barriers, conflicts, misunderstandings or lack of motivation on the "home team" for herein lies the foundation for building good public relations. Here are the salesmen for sound eductional programs.

Our next link in the chain of public relations is our own STUDENTS. No one can deny that right here are the sounding boards and carriers of messages that will either enhance or denounce our school efforts. Do not belittle the ability of our own young men and women to communicate effectively (pro or con) when outside the four walls of the classroom. But what a cheap price to pay for good public relations if our young people can speak out with PRIDE and LOYALTY to school, faculty and learning processes.

We now reach out for our next link of community resources in order to strengthen our framework of public relations. If we are to expand our programs for health services at the pace needed, the PUBLIC must be ACTION ORIENTED. This requires a guiding philosophy and organizational structure which stimulates people with a desire to provide services and a sound reason for so doing.

On July 1, 1966, the impact of medicare and its monumental involvements struck throughout the nation with echoes resounding loud and clear. Schools, colleges, hospitals, nursing homes, all health, welfare and government agencies, insurance companies, manufacturers, etc. have joined the stampede for action. It has been said that medicine is an integration of physical and biological sciences as applied to man and his health. In the same manner, good public relations will integrate and bring together sociological and psychological motivation for productivity and action.

Once these public relations values have been established, the organizational climate for action and service has begun. TEAMWORK develops in the recruitment of trainees, expansion of training programs, initiation of new courses, preparation of additional teachers, upgrading of current faculty members, revitalizing curriculum, automating equipment and construction of new buildings. The spokes in the wheels of progress begin to turn. Slowly at first, but with a gradual gain of speed that picks up momentum as it recognizes that KNOWLEDGE and SKILLS will lead to a HEALTHIER TOMORROW!

It is my firm belief that public relations is one of the foremost keynotes for implementation of successful health service occupations. The HEALTH TEAM has now grown to an oversize family of workers. ALL LEVELS OF ABILITY and PERFORMANCE are included. Human attitudes and abilities can be MOTIVATED and DIRECTED to fit into diversified patterns of occupational productivity and competency. It is our duty to provide opportunity for guidance services, growth of knowledge and skills as a continuum in today's ear of science and technologies.

The impact of public relations should be recognized as a dynamic force. We cannot, however, subordinate the human element to the material element. THE ART OF HUMAN UNDERSTANDING CANNOT BE FORFEITED FOR THE SCIENCE OF AUTOMATION.

Thus, I would conclude that we can capsule our formula for public relations in the ever tried and true GOLDEN RULE. Respect for human dignity, human values and human worth cannot be minimized in our framework to bring about positive thinking and positive results. As long as we have people, the role of public relations will be a never ending one. So--as the vast realm of knowledge grows, let us remember that the opportunity for new knowledge also increases.

Each successive link in the chain of sound educational progress now locks into a firm circlet of COMMUNITY ACTION. Emergent will be patterns for change, guidelines for progress and FRUITFUL RESULTS.

Footnote: Adaptation of BASIC PROCEDURES made from Vocational Division Bulletin No. 288, "Organization and Effective Use of Advisory Committees," U. S. Dept. HEW.

HEALTH OCCUPATIONS EDUCATION CENTERS "FACILITIES AND BUILDINGS"

by

Norman P. Mitby, Director

I am sure you were impressed with the attractive invitation you received to attend this seminar titled "Health Occupations Centers."

In outlining the need for the seminar, on the first page it states and I quote "Health services in the United States face a tremendous challenge today. This most affluent country in the world does not have enough health technicians to meet present demands and to provide services which will be inaugurated under our recent social and health legislation."

In addition to the need for more health technicians is the rising cost of medical care. The total health care bill of the United States in 1965 came to $37 billion. Next to defense and education, health care has become the most expensive service the American public buys. Today everyone expects to receive the standard of health care which a while back only the well-to-do could afford.

Today's health service workers compose our second largest occupational group, topped only by teachers.

Therefore, it seems most necessary that if the schools are going to be successful in meeting health needs of society and the training needs of this large occupational group we should have adequate building facilities and modern, functional equipment. Additional prerequisites are a competent, professionally qualified faculty and adequate community clinical facilities to augment classroom learning.

An adequate building facility, in my opinion, is one of the best recruitment devices for both good students and faculty. These are the basic ingredients that make for a successful program.

Judicious planning is the prerequisite for excellent facilities and buildings for a health occupations education center.

Construction to expand an existing school or to establish a brand new school as a center will be costly. Such decisions will have long-range effects. It is important that planning incorporate a high degree of flexibility which will permit future growth or change at a reasonable cost. The program will consist of two parts, the functional program and the building program.

The functional program, to be developed by the director of the school, will be used by the architect for the building program. Functional programming describes the educational requirement of the courses of instruction in such a way that the architect can determine the teaching, faculty, administrative, and supporting spaces required as well as the equipment and supplies needed to carry out the purposes of the center.

Functional programming will include the setting and control of the program and the relationships of proposed facilities to other usable areas such as libraries. The number of persons to be accommodated in administrative and faculty space must be determined. Teaching space requirements will be based on the number of students to be taught, the teaching methods to be used, and the projection of class schedules.

Programming for teaching space will be based on the size of the group that can be accommodated for different teaching methods. For example, the size of the group for such methods as lecture or lecture with demonstration and student participation will indicate the number of sections of a course that will need to be scheduled. A projection of the class schedule for the maximum enrollment is necessary to determine the type and number of classrooms needed. The architect should be advised of the teaching methods and educational media to be used so that the design and equipment recommended will reflect the school's special needs.

Teaching methods commonly used that affect architectural planning include demonstrations of patient care, and the projection and/or monitoring of demonstrations by television. The architect should be informed of the planned projection for films, slides, tape recordings and other audio-visual aids.

The teaching space to be planned will include lecture, class, multipurpose, and conference rooms, library and laboratories.

Lecture-Demonstration Room

This room should have fixed seating to accommodate at least 100 students.

Televised demonstrations of patient care will require monitoring sets in strategic locations.

This room should also be designed for film and slide projection.

Air conditioning, room darkening equipment (for example special curtains or aluminum cloth shades). Water, gas, electrical outlets, etc., are needed for facilitation of demonstration.

Classrooms

Classrooms with storage areas off the classroom area to accommodate special equipment and apparatus. Include sinks with hot and cold water, multiple electrical outlets in each classroom for use of special equipment. Chairs should be movable in order that the seating arrangement can be improvised or changed for different size groups. Provide for lots of blackboard and bulletin board space.

Conference Room

Conference space will be needed for small group conferences, advisory committee meetings, faculty or staff meetings, work groups, student placement interviews, etc.

Dressing Rooms and Lockers

This facility should be provided if students are to change from street clothes to uniforms and vice versa.

Let's consider some of the spacialized laboratories:

Dental Area

Allow for 2 operatories or 1 large room with 2 dental units and x-ray equipment.

If a clinic facility is planned for, it will be necessary to have a waiting room for patients.

Dark Room

Dark room adjacent to the operatories for use in developing x-rays. Allow for sinks, developing tanks, counter space, and special "safe lights" in this area.

Dental Laboratory

Provide for compressed air, gas, electricity at each station or lab bench. Two sinks strategically located with model grinders mounted on the sinks are necessary.

There needs to be plenty of cupboard space in the dental lab to facilitate storage of alginate, stone, plaster, investment compound and the dental bench engines when the latter are not in use.

Medical Assisting Laboratory

(Note: Medical laboratory assistants share this facility with the medical assisting students.)

Allow for cupboards for storage of glassware, chemicals and solutions. A refrigerator for storage of specimens is called for. The sink in this lab has a pipette suction device connected to it in order to facilitate the cleaning of the pipettes.

A dressing room and a bathroom (lavoratory and toilet) should be located in close proximity to the laboratory. The toilet facility is needed for disposal of specimens.

Students need a bed and bedside stand, if they are going to practice the taking of electrocardiograms on each other. Plan for space in this lab for these items.

Medical assisting students and laboratory assistant students use microscopes. This means that there will need to be storage space provided to house the microscopes.

Needed also are laboratory tables with stain-resistant counter tops, inserts for electricity and gas at each lab station and adjustable stools for seating the students. Allowance should be made for adequate counter space for such items as autoclaves, centrifuge, serofuge, test tube racks, prothrombin machine, analytical balance, and distilled water still.

Other areas such as business education and general education are used by the students in the health occupations courses. Students should have ready access to these areas and some consideration should be given factors such as distance to travel to get to these areas.

Library and Reading Rooms

References and periodicals can be added to the general library of the school or college. Library stacks and study space must be available to accommodate the anticipated enrollment in the health occupation curriculums.

The new sixth floor, 84' 8" by 171' 10", that was dedicated in February 1964, as the education center for our health occupations consisting of practical nursing, medical assisting, dental assisting, medical secretarial, and medical laboratory assisting, cost $529,345.98. Other proposed programs such as dental hygienist, surgical assisting, and a two-year technical nursing program granting an associate degree, requiring additional space, is now being planned. We have estimated that equipment for a dental hygienist program would cost $55,000 for a 12-unit installation.

REQUIREMENTS FOR ENTRANCE TO HEALTH OCCUPATION EDUCATION

by

William H. Lentz, Jr.

One of the most vital concerns of a health occupations education center concept is that of entrance requirements. Decisions as to entrance requirements can vastly increase the quantity and quality of the reservoir of potential candidates --it can increase the dimensions of the educational task--it can increase the economic earning potentials of the individual --it can contribute to a reduction of institutional turnover. Such benefits require our most interested involvement.

Entrance requirements educationally are, in effect, entry behavior characteristics. The educational process of the center will produce terminal behavior characteristics, the characteristics which we hope our students will have at the close of their training. Of course, educational terminal behavior is identical to the entry behavior expected on the real life job. Our concern is with the entry behavior of students entering the educational process.

Without question, there seems to be every reason to believe that terminal behavior in health education will escalate to higher levels--reflecting the demand for better qualified health personnel. We may create more specialists, but we want them to be highly qualified. Nowhere do we find any need, justification, or cry for less qualified people. So we begin with the assumption that educational terminal behavior will increase in quality--thus demanding more in educational content from the health training center.

On the other hand, as we examine entrance requirements, or entry behavior, we find many pressing reasons to alter the requirements to fit contemporary health manpower needs--we find a host of reasons to be flexible and creative in appraising the validity of existing requirements.

It is an obvious conclusion then that the raising terminal behavior and at the same time lowering entry behavior will place a far more significant responsibility on the educational process --but this is another subject. So, too, is the capability of the educational process to accept students with varying entry behavior and cope with their varying learning rates. However, this is a constraint which is imposed upon entrance requirements.

At this point, we have established the first source of entrance requirements--that of the flexibility of the educational process. Other sources of entrance requirements are found in legislation involving licensure and certification; from professional groups in certification and by policy; and from historic or traditional patterns via policy.

Now we have the foundation for seeing a relationship between these sources of entrance requirements and the specific requirements themselves. The transparency enumerates the sources across the top of the matrix including legislation, professional groups, historic policy, flexibility of the educational process and subject complexity. The last column is reserved in this discussion to suggest that objectives for entrance requirements for each occupation should be set by the center itself, based upon contemporary requirements of an occupation. The difference or variance between this objective and that established by any of the present controlling factors is, in effect, the scope of the administrative task of bringing about changes in entrance requirements.

Turning to the more common requirements, we find some which are primarily quantitative in nature, some which are qualitative in nature, and others which appear to be emerging as our experience in health education grows.

Under quantitative requirements, we first explore that of age. Many of the health occupations have minimum age limits set for entrance into training. In some states, for example, this is established legislatively through licensure and certification. Often professional groups establish minimum ages for entrance to training. The motivation of such groups has been that of insuring maturity and quality of personnel, though unfortunately the age requirement is frequently established for entrance into training rather than for qualification for certification or job entry. The rationale of age limitation, of course, developed during a period when health education lacked sophistication and when the burden of education fell almost fully upon the clinical experience.

As we face the shortages of personnel today and tomorrow, and realize the dramatic advances made in educational methods outside of the clinical area, a re-evaluation on this rationale for age limitation into training is dictated.

Also, throughout the nation we observe appalling rates of turnover in certain occupations, suggesting that many of the people we train are destined to have an extremely limited work experience. Since it is an obligation of everyone concerned with health today to seek creative solutions to the turnover problem, an altering of the age limitation to permit earlier entry into training may have the effect of prolonging the work experience of this predominately female group--thus providing greater economic benefits to the individual in the form of aggregate income--and to the health field itself in a positive attack to reduce to a degree the turnover problem.

The other dimension of age is, of course, that of a maximum requirement where today we still find programs which establish an upper age level for candidacy. The rationale of this type of requirement is questionable. Again, to provide a more permanent relief for turnover, the vast potential reservoir of older candidates suggests an opportunity to insert into occupations workers who are mature, settled and in need of the income for longer periods of time.

Moving to educational requirements, we note a trend to escalate educational requirements from 8th to 10th to 12th grade levels. Again, the motive is admirable--but is it not really too restrictive under the conditions which we now face.

With the tight labor market, can we afford to impose such obstacles to entrance as "Upper half of class 'C'" or better? With such high standards we are limiting our recruitment field to the area where we are in direct competition for the college bound student.

To be unpleasantly realistic, how many of the health occupations that we are concerned with here today require a formal one-year course in chemistry, biology or physics? And how much of the course content can be applied directly to health occupations? And how many of the people available on today's labor market can meet such high prerequisites? Three years of mathematics may be desirable for entrance to some courses, but the pupils could learn how to solve the routine type mathematical problems during their health training courses without the benefit of this prerequisite.

I can't help thinking of Jimmy Durante's "Everybody is trying to get into the act" when I think about pre-entrance examinations. Professional associations "recommend" and often supply a battery of pre-entrance psychological tests to help evaluate candidates for many health training programs, and the United States Employment Service uses a standardized test battery in screening applicants. I agree that tests properly administered and evaluated are excellent devices, but they must not discriminate artifically by setting higher standards than the labor pool--thus robbing us of a vital resource.

Too many of the people who may be available to the health occupations lack the communication skills necessary to do well on paper and pencil tests that are difficult to relate to the manual skills and personal relationships required on the job. Health educators must re-examine this carefully to be certain that they are not eliminating from consideration the vast pool of workers sometimes referred to as the disadvantaged.

Letters of Reference--one of the oldest requirements for entrance is the letter of reference, usually secured from the people who know and like us best. How reliable are they?

Although it may be time consuming and costly, business and industry have almost unanimously gone over to a telephone check of applicants.

Under emerging, I have listed several items that are not generally considered entrance requirements. However, when we stop to think about the expanding health field, we would be guilty of gross negligence if we did not qualify every candidate for entrance into a health center on the basis of his knowledge of health occupations.

How many of the people now in training will leave the health field shortly after they complete their training because they didn't realize the pay scales were so low, or the work schedule included Saturdays and Sundays, or that their job duties included a great deal of the so-called "scut work"? If candidates were told "This is a dead-end job," would they enter? If occupational information is not complete, then the candidates lack a basic requirement for entrance into the health field.

The entrance requirements for a health training center must be established for each program, and they will be necessarily as different as the varied and complex services now offered by our hospitals require them to be.

In their zeal to improve the quality of the health workers, professional organizations quite often establish entrance requirements that are rigid and exclusive.

As trainers for health occupations, we cannot stand by and let professional organizations and legislatures establish the requirements for entrance. They may be entirely within their right in establishing the requirements for entry on the job, but it is the prerogative of the trainer to determine the standards for entrance into training.

CONCLUSION

With the present labor situation, we are not in a position to turn people away. We must take them and train them. While we must all strive to raise the terminal behavior specifications, we must also establish programs that will allow us to accept applicants with less developed behavior.

If skilled manpower is to be used effectively, we must consider the disadvantaged for the less demanding tasks until they can develop the requirements to progress to more complex jobs. We must provide the means to continuously evaluate their progress toward meeting the entrance requirements of the next level.

The only entrance requirement that we can afford to recognize is that the people match the occupation. Let us hope that health training research now in progress will develop training methods that will allow us to achieve the maximum yield in both quantitative and qualitative terms from our existing manpower.

STRUCTURAL OVERVIEW OF THE HEALTH OCCUPATIONS EDUCATION CENTER

STRUCTURAL OVERVIEW OF THE HEALTH OCCUPATIONS EDUCATION CENTER

by

Russell C. Frazee

The development path, and the ultimate posture of each individual health occupations education center throughout this nation may well be unique. Each center will begin with varying on-going educational capabilities, with distinctly different regional occupational demands, and with varying amounts and allocations of money, facilities, organization, educational innovation and instructors.

While these are the differences which will lend uniqueness, there is as a common foundation, fundamental considerations basic to all centers... and it is our purpose to examine together these elements, parts and characteristics of the planning structure supportive to the development of health occupations education centers.

It is vital for us to recognize that all the usual hazards to thoughtful consideration of fundamentals, exist in the education center concept...there is an urgency to bring on stream these centers to provide needed health personnel; there is excitement and enthusiasm to produce today and build upon that which exists; there is a natural desire of action oriented people to embrace existing on hand options, in order to gain quick momentum for this very vital educational challenge.

Experience of evolving centers suggests that failure to consider fundamental elements can exact terrible costs in time and money, can impair vital cooperation between groups and individuals and seriously jeapordize final results.

The point of significance here is, that decisions--right or wrong--are required for a variety of elements. If these elements are not brought up for timely consideration and decision--a defacto decision will result which may be quite contrary to the very essence of the developing centers. In short, failure to make a decision or even to know that a decision should be made is in effect a decision itself, however undesirable.

As we examine these structural elements, it is essential to remember that these are not proposals or recommendations for inclusion in each proposed center. Actually many of these notions are highly controversial to some, and insignificant to others. Our purpose here is to insure that all dimensions of the problem are considered--while the matter of final decision is purely and simply a local option.

Let us begin by examing the major parts of our structure.* These parts are grouped first by people and organizations involved, and second by the ideas and concepts involved. In the top left corner, we have identified what is called a COORDINATING INTERFACE GROUP which suggests that an extensive group of interested organizations must be considered in some type of formal or informal organization, for the formation of a center.

STRUCTURAL OVERVIEW OF HEALTH OCCUPATIONS EDUCATION CENTERS

COORDINATING INTERFACE GROUP
Composition
Organization

IMPLEMENTING GROUP
Function
Authority

DIMENSIONS OF SCOPE
A Center Visualization

OUTPUT GOALS
Net Needs

OCCUPATIONAL SPECIFICATIONS
Behavior Specifications
Advisory Groups

COST EFFECTIVENESS GOALS
Criteria and Standards
Return on Investment
Fixed Utility/Fixed Budget

EDUCATIONAL APPROACH
Concept
Curriculum Development
Educational Methods
Teacher Training
Facility Planning

RECRUITMENT

REVENUE SOURCES

PLACEMENT

In the upper right hand corner is the implementing group, which represents those individuals who are actually going to carry out on one hand, the wishes of the COORDINATING INTERFACE GROUP, or on the other hand present recommendations to the INTERFACE GROUP for review and decision. Moving downward, it is apparent that the first concept to be considered must be that of defining the DIMENSIONS OF SCOPE, and as we shall see, there are many dimensions of scope. OUTPUT GOALS suggests a definition of need, but this in itself has many aspects which we shall explore. The classic OCCUPATIONAL SPECIFICATIONS appear deceptively simple at this point, but can pose grave hazards to centers if not managed perceptively. Not only can specifications be out of date, but can be expressed in a completely educationally insufficient manner. At this point the well known concept of cost effectiveness is appropriate to cause the most searching investigation of utility and costs. Finally the development of the EDUCATIONAL APPROACH most suitable to achieve desired goals under optimal cost effectiveness considerations. RECRUITMENT, REVENUE SOURCES and PLACEMENT complete the overall structure, and thus permit us to explore in more detail each of the elements noted.

However, it is important to recognize that the sequence of these elements is most significant, and that failure to consider each in turn, will cause problems and force a return to the point not considered. In short, the structure displayed is sequential and must be managed from this viewpoint.

Let us examine the COORDINATING INTERFACE GROUP and IMPLEMENTING GROUP first on the next transparency. (Transparency Two).

Let us consider the coordinating interface group first from the viewpoint of composition and then from its organizational base.

To begin with, we have identified two groups of educators-- those who administer the didactic or class room phase education, and the clinical educators who administer the traditional clinical education. This rather obvious distinction is unknown to many people concerned with health education who are surprised to learn that perhaps 60% of the total health education experience occurs in clinical and only 40% in didactic. The clinical of course is an attempt to provide environmental exposure. In considering a center, both groups must be present and must be heard. The didactic educators need not be only one level of education but can be several--

COORDINATING INTERFACE GROUP

Composition

- Didactic Educators - Various Levels
- Clinical Educators
- Employers
- Employer Associations
- Professional and Technical Groups
- Certifying Agencies
- Others (Funding and Revenue Sources)

Organization

- Formal Organization Structure
- Informal Committee Structure
- Coordinative Mechanisms
- Unique Interface Problems

IMPLEMENTING GROUP

- Forward Planning
- Consolidation of On-going Training
- Financing and Funding Management
- Programming of Architectural Facilities
- Organize/Man/Launch
- Assumption of Line Authority
- Public Relations
- Research and Development
- Origins of Implementing Group
- Relationship of Implementing to Coordinating

COMPOSITION

- Existing Organization
- Representative Group
- Interdisciplinary Team
- Consultants

secondary, vocational, occupational and technical, junior and community college, and university undergraduate and graduate levels.

Other prospective members of the interface group are the employers themselves, either individually or through collective organizations. Hospital administrators would be typical of employers as well as many others. Professional and technical groups have concerns with education centers, groups so obvious in nursing and other areas that mention here would be redundant. Certifying agencies and those involved in safeguarding the public interest in licensure are appropriate members of interface groups. Others can be concerned, such as those who administer funds or provide revenue. The list is indeed a long one, but truly suggests the variety of interests and concerns in health education and suggests fabulous potentials for aid and assistance on one hand, and serious obstacles if ignored on the other.

If these are the people concerned, how best to organize such diverse interests in order to provide the best in community health education. Here we begin to test the desireability of formal or informal organization structures. For a particular situation would a non profit corporation best serve the community interest, or would an informal committee accomplish the same good for another community. This is a most serious problem, particularly if conflict and tension are part of the community scene. Honest differences of opinion as to the appropiateness of goals and/or the best method of achieving such goals can render an inappropriate organization structure useless.

Then, entirely aside from the choice of organization structure, the coordinating decision-making process must be defined--detailing how decisions are to be made, by whom and when.

Finally, of greatest concern in the development of centers are those people, like you and I, who represent these various groups. These are the ones who actually constitute the interface, and certainly within the health area, we find many dominant personalities who have very strong feelings and perhaps the experience of many achievements--hard won achievements. These people, while formally representing specific groups, invariably reflect their own competent viewpoints.

These things are of course known by all who are active in health education, but what is not generally known is that a successful center can be developed only if these interfaces are aggressively managed--through all the processes of administrative compromise, accommodation of skillful guidance. The latent power of such a group properly constituted, organized and administered can place a health center in "orbit" -- without proper representation, without appropriate organization, and by a default in administration such a group can "blast" a center into ineffectiveness.

While the decision-making functions rest with the COORDINATING INTERFACE GROUP, the working instrument for accomplishing results must be in some form of implementing group. These words of course are used for the purpose of this discussion--the group names can be anything decided by local option. The IMPLEMENTING GROUP is used in two senses, first that of proposing after research and investigation to the COORDINATING GROUP, and second, of implementing such approved proposals are decisions of the senior group.

The IMPLEMENTING GROUP is responsible for forward planning in its total sense, the elements of which will be discussed throughout the rest of this discussion. It is also responsible for consolidation of on-going training, if such exists in a community. The management of financing and funding from the wide variety of sources is a legitimate function of this group. The programming of any architectural facilities can also be assigned to this group, as well as the tasks of organizing, manning and launching the center itself. This group must also assume from someone line authority to accomplish results, and experience in centers already suggests that staff authority is insufficient to obtain forceful action. The area of public relations of a center is an obvious function, despite attitudes that it is unnecessary. There will be public relations -- a P.R. posture--whether by design or not. A far wiser position appears to be that of managing P.R. from the beginning. Because we do not yet have a "book" which instructs us in the establishment of our education centers, the IMPLEMENTING GROUP must perform the research and development function... in short contribute the writing of the book. Thus not only do we need administrators in our group, but we need creative talent.

The origins of a group and the composition can be discussed jointly. For example, an existing organization already active in the community can assume the role of implementation and the functions already discussed. Or, the key organizations can contribute personnel on a full time or part time basis in order to accomplish the task. Or, an interdisciplinary research team can be assembled for the duration of the task. Each approach has obvious advantages and disadvantages which will be unique in each case. Consultants can also be utilized to supplement for example an organization already in existence, but lacking the specific skills vital to bringing on stream a health education center.

Regardless however, of its origins or organizational form, the functions must be discharged by someone or some group. Failure to recognize this point can inflict nearly fatal hardships in the development of any center.

Turning now from people to concepts, we can explore in sequence the DIMENSIONS OF SCOPE, the OUTPUT GOALS and the OCCUPATIONAL SPECIFICATIONS as they appear on the next transparency. (Transparency next page)

There are many dimensions involving the scope of a center. However obvious many of these dimensions are--still problems are arising in many centers because there is a lack of uniform agreement as to the scope of the center. For example, how long a period of time are we planning for--the planning horizon. Is it one year or is it five years? How fast should we gear up--should the operating level of training be reached in the shortest possible time--or can development move in a more gradual manner. The availability of resources of course has a great bearing in setting the development rate. How broad a geographic area will be served--are we envisioning a region, a county, a city? How many educational levels are involved in the center--secondary, vocational and technical, junior and/or community college, university graduate schools? This is without doubt one of the most vital decisions relative to scope which will be made. Other factors of scope include a consideration of revenue and tuition sources to finance the center, which suggestt many other areas beside public financing such as training contracts with health institutions or with junior or community colleges, etc. Entrance requirements, drawing from a changing pool of candidates are other examples of scope which should not be decided by default. Finally, we must define those groups with in the community who will become part of the operating consortia--actual envolvement of the center complex. This of course varies from the COORDINATING INTERFACE GROUP, since the operating group will conduct the actual educational process.

DIMENSIONS OF SCOPE

- Planning Horizons
- Development Rate
- Extended Campus
- Revenue/Tuition Sources:
  - City, County, State, Region, Federal Employers, Individuals, Education Units
- Geographic Service Area
- Vertical Articulation of Education Level
- Entrance Requirements
- Changing Characteristics of Candidate Population
- Operating Consortia

OUTPUT GOALS

- Needs (Level-Mix)
  - Time frame - past/future
  - Recognize:
    - Backlog
    - Shortage - Current
    - Turnover
    - Expansion
  - Complete Universe vs. sampling
- Quantity vs. Quality
- National vs. Local Forces
  - (Medicare, etc.)
- On-going Evaluation
- Relationship to total R.N. Training

OCCUPATIONAL SPECIFICATIONS

- Entry Behavior Specifications
- Terminal Behavior Specifications
- Occupational Advisory Groups
- Employer Advisory Groups (Individual/Collective)
- Shifting Titles for Shifting Specifications
- Fracturing and Specilization
  - Perspective: Occupational Offerings/Quantity Mix
- Certification
- Licensure

The transparency outlines rather well the key thoughts that should be considered in exploring OUTPUT GOALS. Obviously, there is much more to this than the classical "need survey" so popular today. Perhaps the time has come to stop the waste occurring the "flash" survey's of current shortage--and substitute a suitable time dimension into the future and into the past, and then explore at least four elements of need; the backlog, the shortage, the turnover and the expansion factors.

For the evolving center, the "need survey" is an essential foundation for determining the occupational output goals of the center--today, tomorrow and in the future. Experience already suggests however, the best estimates of the future are wanting in many respects, since forward planning beyond the classic one year budget period has yet to come of age. Thus it is imperative to establish the mechanism for periodic updating and review outlook. Without question, for the regional center, evidence suggests that "one shot" need surveys are wasteful and perishable in value. The answer seems to be a combination of an intensive initial survey, with a permanent mechanism for continuous updating by each major employing institution. This continuous audit of need will alert the center to shifting demands, and the forecasts of the institutions will also become more realistic as experience develops.

Thus OUTPUT GOALS provides the center with a time phased demand of numbers of various occupations required by the community to be served. Existing training must be evaluated, and finally the center must decide how much of estimated need through future time, it will assume as its goal. In industrial research jargon, this is what share of the market we shall seek. Even this, is a critical question which the center must resolve in planning its future. This evaluative process of need, must occur despite the severity of existing shortage of people. Too often we hear from the employers, "We can take all you can train," and this call must not deter us from thoughtful evaluation. The entire immediate approach to education can be altered by the longer look at total need.

The points noted in OCCUPATIONAL SPECIFICATIONS are again obvious but raise another crucial problem to the center. While entry behavior specifications to the job can be most precise in the health field, evidence from evolving centers suggest that they are not, and require the most searching reappraisal to make them educationally significant. Over ninety percent of the existing job specifications in the health field are not educationally significant and require entirely fresh looks by properly constituted and creative advisory groups. The implications of creative and properly constituted groups are profound.

The final transparency opens the subject of cost effectiveness in health education, and this is certainly not the place for detailed examination of cost effectiveness concepts, since we are exploring the total structure of the developing center.

However, it is clear that we cannot economically afford to merely arithmetically increase the number of students, classrooms, teachers, (R.N. backgrounds), facilities and equipment and supplies. Rather the center must seek to provide the health occupations needs of the community it serves by providing better qualified students at a drastically reduced training cost per student, in a shorter period (where legally possible), with improved instruction. Serious consideration to alternative postures must be considered from the cost-benefit viewpoint, but then these matters are beyond our discussion now.

However, it is prudent to consider the return on investment concepts we find in health training. For example, the time of the educational process versus the tenure in time on the job--the cost of the educational experience versus the economic worth in salary of the job itself.

And so, too, must the center face, together with the industry, certain problems such as turnover in health institutions, the salary problems, the problems of utilization. How much of the industry problems should we attempt to resolve with our centers educationally? In some occupations people are leaving faster than we can pump them in. How much of the cost of education should each center incur to offset an industry problem, unrelated to education and training? Each center must examine these questions and reach their own conclusions, on whatever basis may appear reasonable.

Finally, after carefully establishing the goals required for a center in terms of quantity and quality of people, and in terms of cost and time and resources, we then search for that EDUCATIONAL APPROACH which can best do the job and accomplish the total mission of the center. It is here that creativity and innovation become the strongest. The bare words of "concept," of "curriculum development," of "educational methods," of "teacher training," "of facility planning," are meaningless unless they are basic elements of a comprehensive educational approach. There is a need for a unifying educational concept in which these fit. There are many possible unifying concepts that could produce most meaningful results. Some are in the process of development--other creative approaches are needed to fit specific situations. In Pittsburgh an "automated tutorial" educational concept is under development. Other concepts are being explored at other centers. The danger is in isolated excursions in curriculum or in methods or in teacher training without the benefit of a unifying educational approach.

COST EFFECTIVENESS GOALS

Name of the Game:

Is it more......students
classrooms
teachers (R.N.'s)
facilities
equipment and supplies

Or is it........better qualified students
reduce training cost
decrease training time
improve instruction
assure output to needs
assure adequate resources

Return on Investment

TIME Education/Job
COST Education/Salary

Should we Educationally Resolve Industry Problems:

- Turnover Problems
- Salary Problem
- Utilization Problem

Fixed Utility Approach and/or Fixed Budget Approach

Establishment of Standards for Criteria

EDUCATIONAL APPROACH

Fundamental Educational Concept
- Curriculum Development
- Educational Methods
- Teacher Training
- Facility Planning

RECRUITMENT - PLACEMENT - REVENUE SOURCES

Recruitment and placement are largely functions of the sources of revenue or tuition of the center. Here again, each center will seek its best mix of revenue sources--federal, state, local, individual, other educational institutions. These sources will dictate largely where the responsibility lies for recruiting and placement.

Thus, we complete this rather rapid exploration of some of the structural parts of the developing center. Clearly, each center will be unique and, equally clearly, each center must consider the many factors just mentioned. The impact of all these decisions will influence the degree of effectiveness of each center. Hopefully, omissions of decisions will be avoided by careful and thoughtful concern of the center structure.

PANEL ON ON-GOING EFFORTS

RECRUITMENT OF STUDENTS; STUDENT AID; PLACEMENT AND FOLLOW-UP

by

Sister Anne Joachim

My understanding of the assignment given me permits me to restrict myself pretty much to St. Mary's Junior College.

St. Mary's Junior College may be called a Health Occupations Education Center, which is the very title of this seminar. St. Mary's offers seven different programs all in the health field: child development technician, medical laboratory assistant, medical record technician, medical secretary, nursing, occupational therapy assistant and radiologic technologist, and several others are being planned.

Today's theme is equally applicable--any faculty member at St. Mary's Junior College will testify that ours is an on-going effort. It is an on-going effort which at this present time in the United States in education in the health field has an extraordinary dynamism. It offers more excitement, more stimulation, more big problems, and more satisfactions than any other effort I know of. The increasing pressures seem to generate enough adrenalin and related substances in us interested folk to assure sufficient effort to deal with the situation we are getting into.

Very briefly, St. Mary's Junior College, which has just completed its second year of operation, with a student body of 550, and a faculty of 54, has done so in extremely limited space. We operated in the former St. Mary's School of Nursing space, with St. Mary's Hospital of some 500 beds as our principle clinical facility and from whom we rent our space. Mount Sinai Hospital, two miles away, is a second facility of about 350 beds which four of our programs use extensively for clinical experiences. Next year we will add St. Joseph's Hospital in St. Paul, a 480 bed facility about eight miles from St. Mary's Junior College. At this site, we will rent classroom and office space which was formerly used for a school of nursing, as well as use of clinical facilities. In addition, dormitory space will be available for women students.

The faculty at St. Mary's Junior College has been concerned about its purpose and role. Over a period of time, we have come to some clarity and agreement in our thinking about what college level technical education is, what general education is, what their significance is for our students and for planning our programs. This is stated in a pamphlet, THE ST. MARY'S PLAN, which we consider a basic and most important document. This statement forms the basis for our policy decisions, and it forms at the same time the framework for program development, student recruitment and selection, as well as for faculty responsibility. I never go anywhere without the ST. MARY'S PLAN, if any of you are interested. I will not at this time go into a description of our ideas of technical and general education, but I do want to say they are important even as I talk of student recruitment, student aid, placement and followup.

STUDENT RECRUITMENT

Our student body shows, as we want it to, a wider range of backgrounds and abilities than I suppose the usual private junior college does. Let me refer briefly to our freshman profile. We hope in the future to secure an even more diverse group. The students have come to St. Mary's Junior College through a variety of channels seeking preparation for jobs in the health field. I think they are more often seeking job preparation than they are seeking education for itself. Were I talking on curriculum, I would spend some time discussing the probable significance of this motiviation and the challenges it presents to a faculty truly interested in sound and round education of the person.

The usual sources of applicants which we use include the following:

High School Career Days Last year, we attended some twenty career-college days. These projects are sponsored by the high schools and undoubtedly very familiar to you. The present trend, happily, is toward a cooperative approach in which a number of schools join in one such venture annually. We spend a considerable amount of time and energy on these efforts more because we are extremely interested in the public becoming accurately acquainted with our purposes and activities (so many still think that all hospital and health workers are nurses) than we are soliciting applications, with which we are already overwhelmed. This may be said also for each of the other activities I will mention.

Meeting with Counselors Each year we have held several meetings with high school counselors. For these we have sent a letter of invitation to each high school in the metropolitan area (the first year one was statewide, one covered a five-county area) in which we merely invite them to attend so we can explain our new junior college and its offerings, and answer questions. We have accepted at least two invitations from counselor groups to explain our program offerings and what kind of job preparation this is. This spring the local Tuberculosis Association sponsored a two-week workshop for five or six high school counselors which provided intensive health-related orientation. They spend an entire day with our faculty.

Governmental agencies which have been helpful sources of referral for us include such ones as the Office of Economic Opportunity, Vocational Rehabilitation, U. S. Employment Office, state and county welfare agencies.

Within the health fields, a variety of persons are great recruiters. For example, physicians, who sometimes refer their young patients to us, have taken to referring their relatives, personnel from their own offices, and untrained hospital staff members.

Transfer students with up to three or more years at other colleges constitute almost one-fourth of each class. The referral in these instances comes most often from the college counselors and from our own students (who are vigorously enthusiastic about St. Mary's Junior College).

Faculty members at the University of Minnesota have been involved in our planning and evaluating all along and have been more prestigious recruiters than we could have imagined would be ours.

Students who are involved in new ventures such as St. Mary's Junior College become stimulated by the kind of pioneer spirit necessary in the faculty when they are operating with practically no money (except for good salaries) and inadequate facilities. This pioneer spirit or mood is invigorating and attractive to others.

Open House About every six weeks this past year, we have held an orientation open house for accepted applicants. To these we have also welcomed those merely seeking information.

An aspect of recruitment which is necessary in an early stage at a junior college only two years old is that of studying the characteristics of the applicants to the school, those accepted, those rejected, those who succeed in the school, those who fail or for other reasons leave, those who succeed after graduation and those who do not. Results of such study will be of great importance to us for student selection.

A study closely related to this same purpose is that of the jobs themselves and of successful workers in these jobs (and in new specialties as they will emerge in this new cycle of changing health care patterns). Such study will be very important for occupational guidance of students. I can negatively illustrate this with our failure with a food service supervision program, one which sounds good and very promising to us, but for which we have had only three qualified applicants in our two years.

Student Aid Referring again to our student profile, a listings of fathers' occupations indicates that a sizeable percentage of our students need help from sources other than home. We use the ordinary means of private scholarship funds including our own, which because it is so new is also very limited. Although several local groups offer occasional scholarships, women's auxiliary groups at those hospitals where our students have clinical experience appear to be the most promising both for amount and for perseverance of interest.

As we become more established and more fully accredited, more government scholarship and loan money will become available to our students.

The one student aid which is more widely used and consistently available to our students is the part-time job. Almost every one of our students holds a part-time job (some with very heavy hour requirements) for the entire time he is enrolled in the college. There is less seeking to match the job with the student's major than one might expect. (Nursing students work as messengers, laboratory students as ward clerks, etc.). There is, however, a clear preference for hospital work of some kind. This is undoubtedly related to the high hourly rate of pay. Anyone of our green, inexperienced, scared, little kids can get a job beginning at least at $1.70 an hour, which is pretty good for someone from Greenbush, Minnesota, where she has been saving every 85¢ she has gotten for each hour of work the past several years. These employers, though, are not being unwise in this investment, as a very high percentage of the students at graduation remain on the staff of the hospital where they have had part-time jobs. Continuing access to an always refilled pool of educated labor is no small matter in these times of health-worker crisis.

Placement and Follow-Up Placement of the graduates of our programs is of much concern to us. We have defined what technical education is, how it is distinguished from vocational education, how it is distinguished from professional education. We have set standards of technical or occupational competence which each student must satisfy to graduate. We have laid out objectives concerning technical behavior which each student must achieve. All this surely means we have a pretty definite idea of the job for which the graduate is prepared, the amount of responsibility he can assume, and the supervision he probably needs, as well as what his role is in relationship to the professionals with whom he will work. Because of such facts as the serious shortage of workers and the increasing pressures on administrators to expand services, we have made a special effort to orient prospective employers about the kind of job these graduates can do and at which they will be most productive and satisfied. This we did by a series of meetings over a period of several years. First, we met with various representatives of the public, then with hospital and nursing home administrators, then with directors of personnel departments and with such department chairmen as the various administrators chose to send to the meetings. We intend to continue this activity.

Probably the thing on which we are most dependent and in regard to which we are most optimistic is the graduate himself. We have gone to considerable lengths to clearly define the technician's job to the student, to help him to come to an accurate, full and satisfying understanding of his role. We view the technician as having a responsible position and one of dignity in society. In our college, he is in a program for which he receives bona fide college credit and a college degree. We respect this. We work hard to communicate this to the student. To date we are still confident that a clear picture of his rightful place in the work situation, realistic expectations of himself in performing the job, along with the status and prestige accorded college education and a college degree will satisfy his reasonable yearning for "a place in the sun," and thus preclude the temptation to pretend to be something he is not.

We see placement of our graduates as a matter of their choosing among many attractive offers in hospitals, nursing homes, doctors' offices, clinics, rehabilitation centers and other health and medical agencies, the armed forces, industry, and schools.

Our plans for follow-up include the established methods of questionnaire and interview with employers and graduates in relation to college objectives, as well as the expectations of the graduate himself and his employer.

We look to our newly established alumni association to play an important role in the follow-up and evaluation. We hope the tone and spirit of this new association has been set by our plan to invite them back annually for a workshop-kind-of-day. One day each spring will be devoted to refresher lectures, demonstrations, reports, and discussions planned and led by the faculty members and alumni. Included will be outside experts in each field invited in for the day. These first graduates left St. Mary's Junior College one month ago with rather well developed skills in discussion, and in critical evaluation of their own performance. We look forward to serious discussion sessions with these returning graduates in which their year's experiences will be pooled, discussed, criticized, examined and weighed, resulting in what may be the very most useful evaluation the faculty could possibly get.

TRAINING TEACHERS FOR THE ALLIED MEDICAL FIELD

by

R. William Graham

During this conference repeated reference has been made to the shortage of qualified technicians in the allied medical field. Indeed these shortages do exist, and positive action must be taken to improve the situation. However, a major problem in the training of well-prepared technicians is the dearth of qualified teachers available to staff new programs as they are developed. Accurate figures on the quantitative need for teachers are difficult to compute. Professor Norman Harris of the University of Michigan estimates that there is a gap in the paramedic occupations of 20,000 two-year graduates per year. [1] Assuming attrition at 30 percent (which in two-year programs would likely be even higher) 26,000 new enrollees per year will be needed. Translated into teaching faculty at a student-teacher ratio of 20:1; the immediate need for new faculty can be set at approximately 1,700 instructors--some in science and supporting technical courses' some for general education courses; and perhaps 1,000 for specialized occupational courses. If we are fortunate enough to recruit the initial 1,700 in the next two years, the ensuing annual demand to provide for future growth, deaths, and resignations for various reasons, the field could easily absorb some 300 new teachers per year for ten years.

To emphasize the magnitude of the problem, I refer to statistics released by the A.N.A. Department of Baccalaureate and Higher Degree Programs: During 1965, there were 10 baccalaureate, 40 associate degree, and 3 master's programs in nursing reporting enrollments for the first time. This was an addition of 114 new programs. Added to this were inquiries from 67 additional colleges which were interested in establishing new schools of nursing. The number of graduates from master's degree programs increased by 97 during the same year that 114 new programs were reporting enrollments for the first time. If faculty vacancies and existing programs are ignored, this is still less than one master's degree for each new school. In addition, 39 of the 56 masters' programs showed 54 budgeted vacancies for 1965 for faculty in masters' programs in nursing. If these were filled first, this left 43 individuals to staff the 114 new programs.

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[1] Harris, Norman C.

Where will the new teachers for the two-year programs be trained? Teacher training institutions have traditionally concentrated on preparing teachers for the elementary and secondary schools. While the American Association of Junior Colleges is endeavoring to focus on the problem with the aid of foundation support, it does not appear that formalized programs for the training of teachers for the health field will develop in the near future. A recent survey by the AAJC showed that graduate deans of a sizeable number of universities were not sure that teachers could be encouraged to train to teach in career programs. They indicated that in many community colleges which have allied medical curricula it is difficult to attract faculty members to teach in the career programs because of the lack of status that teachers of technical subjects have. I personally feel that academic degrees are false status symbols, especially the Ph.D. For example, I have on my staff a highly respected Professor of History whose dissertation for his Doctor of Philosophy degree was entitled, "The History of Fire Engines in the State of Missouri." This man happens to be a very fine history teacher, but I am not certain that the hours spent poring over the reference volumes researching the History of Fire Engines made him a better teacher of freshman and sophomore studentss.

Many currently operating programs are staffed with personnel trained only at the technician level. For example, a dental assisting teacher who possesses only an associate of arts degree is not uncommon. Problems arise, however, when salaries for technicians are not in line with the academic faculty. If we are going to succeed in attracting competent people into the teaching profession, we are going to have to pay salaries commensurate with their skill, experience, and potential ability as a teacher. Unfortunately, recruiting teachers for the academic areas does not pose the same problems as attracting them to teach in technical career programs. An English major or a major in world history may be an excellent scholar and complete many hours of graduate study without ever considering becoming a teacher. Then some day he may wake up to the fact that it is very difficult to make a living as a historian. He is then motivated to turn to the field of teaching. The highly successful health practitioner whom we would like to have conduct the classes in our health centers must be coerced into the classroom by other means. In the first place, we must have a salary structure which will attract him. In the St. Louis Junior College District we openly negotiate the salaries in our technical career programs, while the academic faculty are placed on a rather rigid salary schedule. This technique tends to provide grounds for discontent on the part of the academic faculty, but we attempt to overcome this by arguing that each member of the faculty, be he in an academic discipline or a career program, is a representative of the institution. We ask the academic faculty what caliber of individuals they want as their colleagues. They will usually agree that they do not want a full-time dentist who can be employed for $7,000 or $8,000 per year.

Many practioners in the health field are frightened at the prospect of teaching in a college health center. When they enter the classroom they do not know if they will like teaching, and the administration does not know if they will be able to learn how to teach while on the job. Of course, the same thing is true of most Ph.D.'s who are employed right out of graduate schools to cover academic assignments.

While we must be willing to pay competitive salaries if we are going to attract good practitioners into our technicians' programs, I feel that we must resist the pressures by accrediting agencies and registries which may force us to price ourselves out of business. For example, the Council of Medical Education of the American Medical Association sets rather rigid standards for the operation of the medical technologists' programs.2 They require for accreditation that a graduate in medicine who is certified in clinical pathology by the American Board of Pathology serve as the director of the program. Further, in laboratory practice the enrollment may not exceed two students to each member of the teaching staff. Also, the staff must include not less than one instructor whose duties include supervising the teaching program and who possesses a bachelor's degree and is registered as a medical technologist. This person is in addition to the laboratory director. A similar requirement is indicated for cytotechnology programs. It is recommended that enrollment in the school should not exceed two students to each member of the teaching staff. Further, a minimum of two students is recommended for enrollment in each class. The council goes even further in prescribing the type of instruction which shall take place in these classes of two students each. They suggest that lectures and demonstrations in anatomy, histology, embroyology, cytochemistries, cytophysiology, endocrinology, alterations and abnormalities, etc., should be presented. Further, the preparation of materials for examinations, record keeping, indexing, and methods of correlating cytology with the pathological diagnosis should be taught. Why cannot some of this material be taught on a group basis?

In order to set up an inhalation therapist program, the courses must be taught by an M.D. Further, in clinical courses

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[2] Essentials

the ration must be 4:1 with a registerd inhalation therapist handling the training. This is an interesting requirement. As nearly as I can ascertain there are only 200 registered therapists in the entire United States. In St. Louis, for example, which is one of the three largest medical centers in the United States, there are only two registered therapists.

I could cite similar requirements for x-ray technology. Fortunately, the requirements for occupational therapy, physical therapy and medical record librarian are a bit more liberal. As a college administrator, I would under no circumstances feel justified to recommend these programs as they are outlined to a board of trustees responsible for the wise use of tax monies. A basic question should be asked, "where is the magic in the 2:1 student-teacher ratio?" Or in the A. D. nursing program, why can the job be done only if the ratio is 8:1 or smaller? I understand that an experiment is being conducted at Morton Community College in Illinois where 60 students in a maternal and child care course are having the clinical experience directed by one teacher.

It is obvious to me if we are going to solve the teacher shortage in these areas that we are going to have to convince the various accrediting societies and registreis that we can accomplish the job using more mature and sound educational methodology. The Socratic method was a practical method in Ancient Greece, but Socrates did not have available to him responder units in lecture halls, overhead projectors, slide projectors, film loops, dialog, and audio-tutorial equipment at his disposal. The question then arises, "How are we going to secure staff trained and competent in the use of newer techniques when their own training has been one of the pseudo-apprentice character?"

Several possible solutions immediately come to mind. I feel that there is a great need for summer workshop institutes for upgrading the skills of the teachers in these career programs. Perhaps these should be financed by federal funds or foundations. Certainly, the staff members teaching in dental hygiene programs are just as important to the welfare of the country as are counselors or teachers who aspire to be administrators. The Federal Government has sponsored under the National Science Foundation institutes for upgrading counseling personnel and the Kellogg Foundation has an ongoing program for training administrative personnel to work in community colleges. At Los Angeles Trade Tech., the teachers elected to the faculty directly from industry who do not have formal education courses are required to take at least six credits per summer at the university during their first two years on the faculty.

Manatee Junior College in Florida is conducting a series of study visits in their Nursing Department under the auspices of the Kellogg Foundation. Under this program nurses teaching in A.D. programs visit the Manatee campus for one week to study the techniques of teaching in the associated degree program.

While summer institutes and visitng programs are certainly worthwhile and helpful, it should be obvious by this time that this approach by itself will not solve the teaching shortage in the allied health field. Perhaps we should look once again at the overall problem. Some educators contend that education in itself is not a discreet discipline: That is, it contains no teachable subject matter as such. It follows by logical reasoning, then, that teachers are either born, not made; or that they learn only from experience using trial-and-error methods. If on the other hand we accept the hypothesis that teachers can be trained, then we must make the decision as to whom must accept the responsibility for training teachers in the allied medical health field.

Dr. Robert Kinsinger in his address at the American Association of Junior Colleges meeting this last spring stated, "A few universities have undertaken programs, particularly in nursing, to enable an individual to shift his vocation from paramedical practioner to accomplished teacher training programs service field. Objectives for these teacher training programs are based on the assumption that the trainee is a competent experienced paramedic practitioner. The composite goals of these programs are to enable the teacher trainee:

1. To become familiar with the underlying philosophy and operating procedures of the educational institution in which he will teach,

2. To learn to use a variety of instructional techniques, i.e., lecture-discussion, demonstration, independent study assignments, audio-visual media, directed clinical practice,

3. To organize a curriculum in his field using all tools of instruction such as tests and measurements, library resources, a variety of help agencies for practice and observation, etc.,

4. To bring his knowledge up to date in his technical field and to add to his depth of understanding in his field,

5. To supplement, as appropriate, his general background in the physical and biological sciences in the Humanities." 3

If it is appropriate that universities accept this assignment, then pressures will have to be brought to bear to entice more universities to expand their offerings and train teachers for the health field. Norman Harris of the University of Michigan sounds a pessimistic note, however, when he says, "Somehow most teacher training institutions subscribe to the notion that training elementary and secondary teachers is their regular business and has first call on the general budget; and that training community college teachers is an 'extra' job, which can only be attempted if 'extra' money is available from grants or supplemental appropriations. Our task, and it will not be easy, is to reorient schools of education and teacher training institutions so that the preparation of junior college teachers (in technical fields) will become a recognized responsibility with a fair share of staff time and general budget allocation."[4]

With the magnitude of the job ahead it might be well to explore another possibility. During the past year several diploma nursing programs have been discontinued. I previously referred to the reluctance of the universities to do the job, and apparently hospitals are finding the cost of training practitioners prohibitive. In industry the large corporations have accepted the job of training personnel when educational institutions have failed in this task. Many manufacturing concerns employ full-time directors of education. It seems appropriate, then, that educational institutions which train practitioners for the allied medical field might also assume the responsibility for training the teachers who will teach the courses. The Midwest Technical Education Center, which was organized last year under a Carnegie Foundation grant in St. Louis, recently received $500,000 from the Ford Foundation to be administered by the Junior College District of St. Louis and St. Louis County and Southern Illinois University. Under this program, interns in any field of technical education will work on one of the junior college district campuses as interns in preparation for teaching their specialties at some other junior colleges. It is anticipated that several registered nurses will spend a

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[3] Kinsinger, Robert E.

[4] Op. Cit.

semester as interns in our A.D.N. program this next fall. This approach, however, is nothing but an extension of the apprenticeship concept. If adequate numbers of teachers in the paramedic fields are to be trained, it would make more sense to use group techniques for training these people how to be more proficient teachers. Perhaps each health center should provide a staff of professional teacher trainers. On my campus, I have a full-time administrative staff of nine persons. The area of instruction alone has three deans. In our Policies and Procedures Manual, I am charged with the responsibility of in-service training or staff development of our faculty. Because of the press of building a $23,000,000 campus and planning to double the teaching staff next year, our efforts at in-service training are really quite pathetic. We take two or three days for orientation for new teachers at the beginning of the term, bring the staff together for a few days for pre-planning before the semester begins, take them on a weekend retreat to discuss the philosophical aspects of the junior college movement and then subject them to one faculty meeting per month during the academic year. I have to admit that our efforts at in-service training neither make nor break a teacher. Further, our instructional deans visit our teachers in classroom situations at least twice each term and attempt on an informal basis to make constructive criticisms. These deans and even our division and department chairmen are not subject matter specialists in the areas of all of our teaching faculty. I do not apologize for our in-service training program; it is typical of most community college programs, but it just does not teach instructors how to teach! If we are going to do the job that is needed we will have to secure professional master teachers who are released from their teaching assignments a portion of their day to transmit their teaching techniques to fellow practitioners who already have developed adequate skills in their specialties. On my campus, our director of nursing education is a former head of a diploma program. We employed her because she possesses among other credentials, a master's degree in science education and twenty years of experience as director of a nursing school. She is currently conducting an intensive training program for her staff to help them become master teachers under a philosophy which is new to her. We are fortunate that she is flexible enough, in addition to being willing, to change her own philosophy. We feel that it was better to choose her to do the job than to appoint a relatively inexperienced A.D. program-oriented person who would not be able to teach her staff members how to teach.

I shudder to think what the reaction of our board of trustees would be if I were to recommend the employment of the necessary personnel to accomplish a full teacher training program in our campus under our present philosophy, since the comprehensive community college does not view teacher training as one of its roles. If over the next few decades, however, we are going to build programs which will turn out well-prepared two-year graduates in the health field, we are going to have to uncover or develop for ourselves adequately prepared and talented teachers. I feel that the funds devoted to the teacher preparation aspects of the program just proposed can be justified on the basis of ultimate good to the community. As an administrator perhaps it should be may job to orient our board of trustees and the citizens of the community.

This approach might seem like a rather drastic one, but I, for one, think that it is time that we stop disparaging the lack of qualified teaching personnel in the technical fields and take some positive action. I would like to see some foundation or federal funds made available to support this type of program. Pilot programs on a limited basis are just getting underway in New York State as a part of the Community College-Health Careers Project.[5] Dr. Sheldon Steinberg has recently replaced Dr. Kinsinger as project director. They have set up two teacher preparation centers for this second phase of the project. One is at the State University of New York at Buffalo and the other at the City University of New York in New York City. Each of the university centers will concentrate on five of the ten technical health careers covered by the project. The areas covered are: ophalmic dispensing, x-ray technology, operating room technology, medical emergency technology, inhalation therapy technology, environmental health technology, dental assisting, occupational therapy assisting, bio-medical engineering technology, and medical record technology. Upon completion of the teacher training program graduates will be eligible to move to selected community colleges in New York State where they will initiate curricula and prepare students for careers in their respective technical health areas.

I believe that this concept should be greatly expanded. If the community college is to be considered a teaching institution devoted to efficient methods of teaching rather than scholarly research, why then shouldn't these same methods be devoted to the preparation of teachers for the health field? The New York project is limited to ten teacher training candidates on each of the two campuses. With this limited number of teachers involved, it will be difficult to develop techniques which will be far removed from those used under the apprentice concept. If we are going to accomplish the task, we must be prepared to train these people in large numbers. A dozen or so years ago, I was responsible for the apprentice teacher training in a state college in Pennsylvania. Even though we used the term "apprentice" in our title, we still thought nothing of handling groups of 30 in the training program. In fact, we even had our own laboratory school on the campus where we gave the student the opportunity to teach his skills under close supervision and the observation of large numbers of neophyte teachers. These techniques are not new--they have been in use for fifty years.

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[5] Kinsinger, Robert E. and Muriel Ratner

My final recommendation in this paper is that whatever approach we take to training personnel to be teachers in the health field must assume the character of the crash programs organized in World War II. If we are going to keep up with the numbers game and turn out the quantity of practitioners required to do the job in the area of teacher training, we are going to have to declare a national emergency.

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FACTORS INFLUENCING PLACEMENT OF CENTERS

by

Arch Lugenbeel

INTRODUCTION

Literally, there are hundreds of factors that could influence the placement of health education centers--some unique to certain sections of the country, some general in nature, and some rather specific. In thirty minutes anyone of you in this audience could develop a list of placement factors that would reach into the hundreds. (Mr. Frazee alone listed seventy-to-eighty rather specific factors in his talk prior to lunch.) It is, then, the intention of this paper to develop two interrelated, yet independent themes--the overall theme is the topic, Factors Influencing Placement of Centers. academically sketched in broad terms; and the underlying theme interwoven into the design of the topic is a sharing of facts and ideas that I have had the privilege and consternation of figuratively "butting my head against." It is quite conceivable that the underlying theme is and will be of much more importance to you than the academic sketch of the topic.

FACTORS

ECONOMIC ⇨ FEDERALISM
STATES RIGHTS
PROFESSIONALISM
POWER STRUCTURE

POLITICAL ⇨ EDUCATION
HEALTH
WELFARE
MANPOWER

GEOGRAPHIC ⇨ DEMOGRAPHIC
GEO-REGIONAL
GEO-STATE
NATIONAL

SOCIAL ⇨ GNP
TAXES
GIFTS
FEES

Academically, this visual shows that according to this paper's interpretation, there are four major broad factors--economic, social, geographic, and political. The descriptive factors listed under each of the major factors are, of course, of my own choosing. That you could add others, delete some, and challenge all of them is readily recognized. There is no "holy order" here, only a broad sketch. Those factors that should be more meaningful to you are found in the demographic, geo-regional, geo-state, and power structure descriptive information. With this as our background, let's look at each of the factors and their descriptive information in sequential order as set forth in the visual.

ECONOMIC

Economically, the GNP (Gross National Product) is at an all time high and is expected by the prognosticators to go even higher.

The significance here is that with our present and future GNP we can safely assume that the financial burdens related to construction, operation, and expansion of health occupations centers can be met. The vast dollar economy that we share today is of course in direct ratio to the taxes, gifts, and fees that can be utilized for such centers. Therefore, economically the placement of health occupations centers is quite feasible, if we and others like us can band together at the state, regional, and national level to prove the value and worth of such centers. Some of us are already doing just that.

SOCIAL

The revolution here is astronomical. Not since the days of the Industrial Revolution have so many changes been felt on the social front. Its influence on centers for the education of health personnel is the main reason why we are here at this seminar.

Change is developing so fast in these social areas as well as other areas that they are being spoken of as explosions. For instance, in education there is an explosion of knowledge. Since 1945 our amassing of knowledge has doubled. By 1970 it is expected to double again. In retrospect, since the Stone Age this great amassing of knowledge has doubled four times up to 1960.

This development has led to much specialization in all fields of endeavor and especially in the health field where the knowledge explosion is even more rapid and prolific. Scientific and health knowledge is doubling every eight to ten years. MI.I.T. reports that it's library is doubling in volumes every eight years. It has been stated that of all the scientists that have ever lived, ninety percent are living today.

In health the explosion has been restrained, but the blasting cap was added as of July, 1966, with the initiation of Medicare. The one major factor that has been pinpointed by this national commitment to adequate health care is that there is not sufficient health personnel to do the job - not enough professionals, not enough helping hands, and not enough facilities to train adequately.

The war on poverty (welfare) has exploded in the headlines, if not in full realization. This war is with us - a commitment of the era - and health care, health training, and health personnel needs are part and parcel of this drive for a place in the sun. Such centers as we conceptualize here today must be an integral part of this movement; otherwise, the comprehensiveness and the true economy as found in the philosophy of this far-reaching health education development will be severely limited.

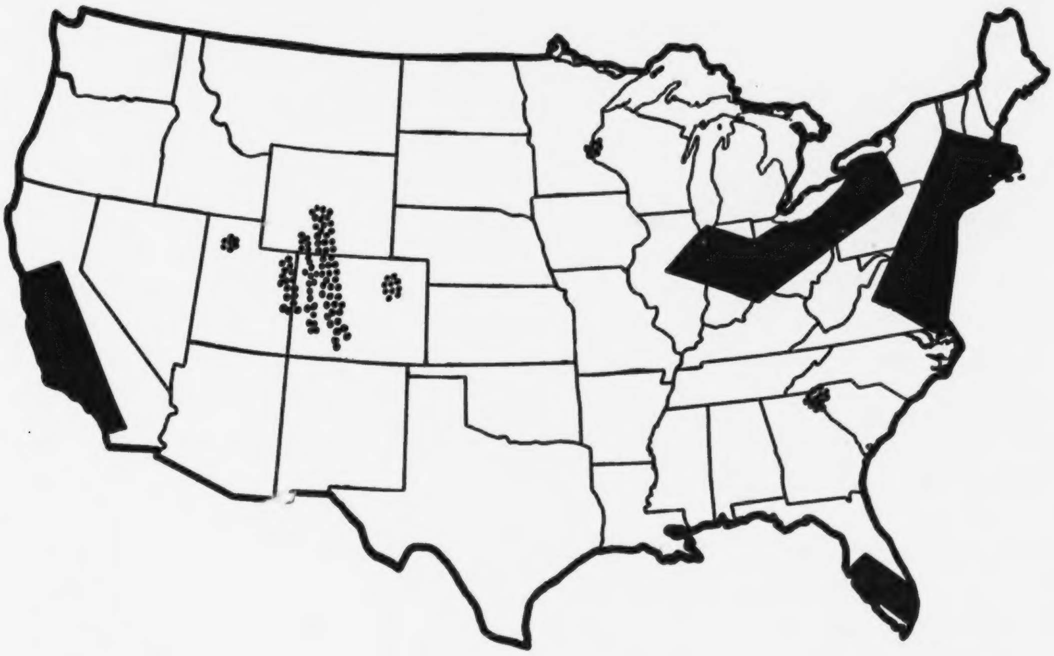
The manpower explosion is on all fronts, not just in the health field. Therein lies one of the reasons for the crisis in health manpower today -- there is competition on all sides for the capable worker, female and male. The female is no longer limited to a few occupational areas and the male is invading previously female dominated areas of endeavor. Today's manpower revolution is a moving, dynamic impact-agent causing established occupational structure to change, bringing about high specialization and a concomitant deskilling of functions of various highly skilled jobs, and causing a greater mobility of the national labor force than ever imaginable. To the health field this means more youth in training or in the labor force, a dearth of workers in the mid thirties and forties, a limited number of highly skilled persons being served by many "helping hands" designed to take up routine functions of the highly skilled, and a populace that will require more training and retraining either because of its mobility or its changing job structure.

The significance here is that socially we are riding the creast of a huge wave - a wave of commitment to national needs. It is my contention that the health education center concept is one solution to this commitment to our national social needs.

GEOGRAPHIC

As mentioned earlier, this part of the paper will deal with a sharing of practical application ideas that I have gained over the past two years, not just rhetorical statements gleaned from others. Geographically, as in all the other major factors which can contribute to the placement of health education centers, there are four points under discussion. Here I would like to concentrate primarily on the first three--demographic, geo-regional, and geo-state.

ALMOST HALF LIVE IN 4 STRIP--CITIES



Demographic or population trends and happenings, if you prefer, are shaping our ways of living, our mode of transportation, and in turn could very definitely shape the placement of centers. "Strip cities " are a phenomena of our time. As shown by the visual, almost one-half of all the people of this country live in four "strip cities" -- Boston/Washington, D. C. and surrounding areas, Buffalo/Chicago and surrounding areas, San Francisco/Los Angeles and surrounding areas, and St. Petersburg/Miami and surrounding areas. Today, approximately eighty-six million people live in these "strip cities" outlined on the map. What is the impact here on the placement of centers, beyond the concetration of people? We can answer that by asking other questions. What about the other half of the population? The rural states - where do they fit in? Remember we are talking here at this seminar about centers for educating health personnel for all the peoples of this nation. Medicare has made this national commitment. We as specialists must, therefore, recognize that "when people move" things happen, and this places priority on health care and health training whether it be rural health care or megopolis health care - each has its place in the over-all scheme of better health care for the nation.

Geo-regional implications, based upon demographic conditions, should be readily recognizable. Therefore, let us further examine this visual.

Here is a series of dots--they represent to this paper "how we might establish centers regionally." I am sure you could point out additional ones and, given time, you should. Let me go to the West first because I feel there is a uniquely geographic regional development here that can be readily ascertained. This is in Denver at the Continental Divide. Dr. Kevin Bunnell, Associate Director, Western Interstate Commission for Higher Education, at a conference similar to this in St. Louis, suggests the practicality of a program in Denver serving not only eastern Colorado, but western Kansas, and Nebraska and southeastern Wyoming. At the same time Salt Lake City sould serve Utah, western Colorado, southern Idaho, southwestern Wyoming and northeastern Nevada. The same is true in the east. For instance, Pittsburgh which is presently committed to work with twenty-three south to northwestern counties of Pennsylvania could easily assist in the training and education of northern West Virginia, northwestern Maryland and eastern Ohio. The other dots on the map represent the same idea and I'm sure you can easily see others. In my own state, South Carolina, we are presently developing a center in the northwestern part of our state which will serve parts of Georgia and North Carolina.

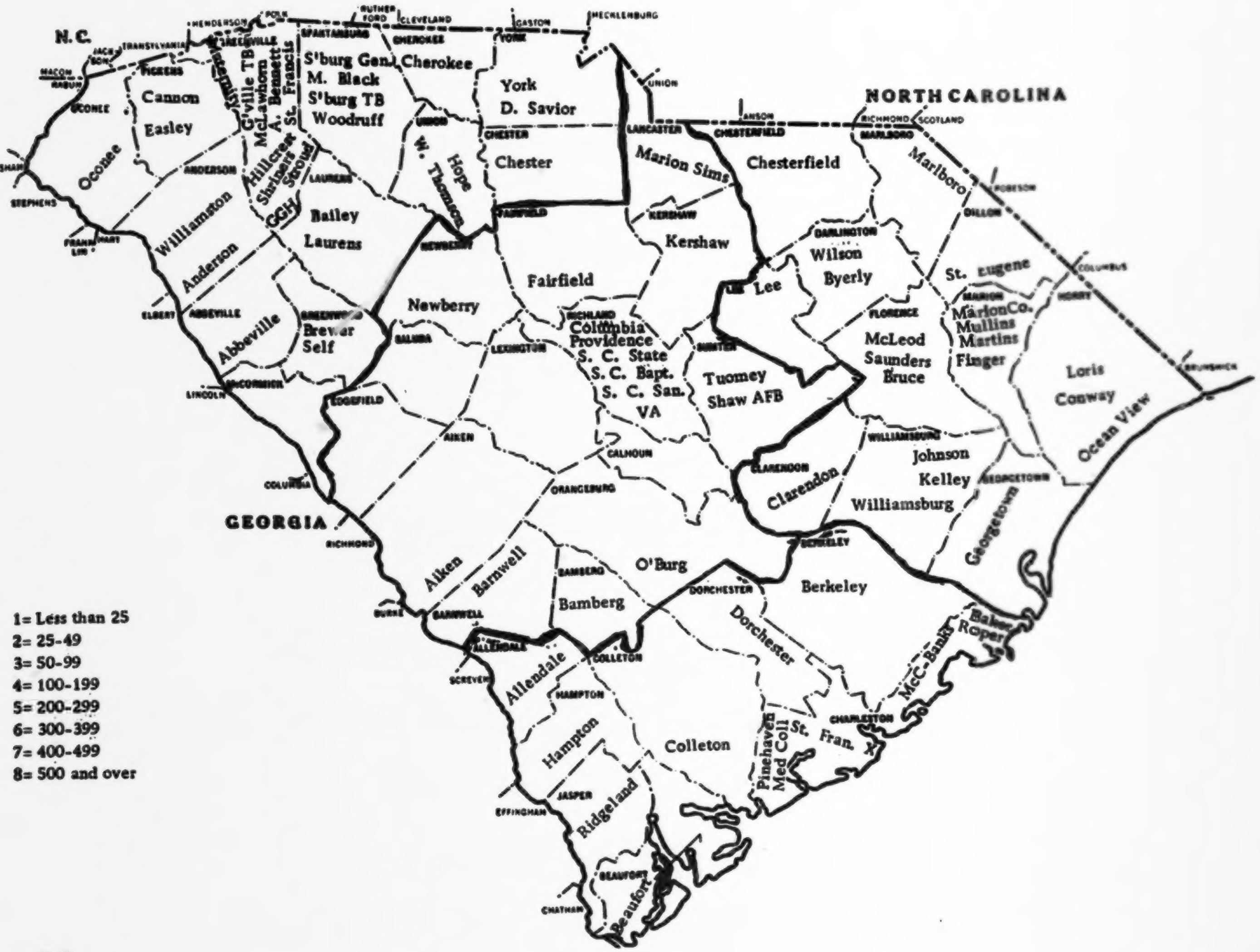
Before I leave the geo-regional concept of development for centers and move on to the geo-state aspects, let me state this from Dr. Bunnell's talk--"Whenever possible, let the area to be served...be determined by natural economic, geographic, and social relationships rather than by artificial state boundaries..."

SOUTH CAROLINA

$2\frac{1}{4}$ ---MILLION POPULATION
4 ---MAJOR GEOGRAPHIC REGIONS
4 ---MAJOR CITIES
1 ---MEDICAL SCHOOL
11 --- TEACHING HOSPITALS

This visual relates the state population, the geographic regions within the state, the major cities (none over 150,000 population) along with the health educational facilities. South Carolina as a geo-state composite is an add-mixture of agri-rural, industrial and seaport commerce. The teaching hospitals as mentioned here are "teaching" in the sense that they have para-medical programs established and on going. Only one is a true teaching hospital in the health field sense and that one is connected with the medical college.

As shown on the following map there are four natural geo-state regions in South Carolina. The upper northwestern area is called the Piedmont. It is noted for its industrial development, especially textiles. The middle area is appropriately entitled, the Midlands. This is the seat of government for the state and is mostly agricultural. The lower southeast section is the Lowcountry (written as one word by the locals, like in damnYankees). The Lowcountry or Tidewater, as it is also referred to, is heavily agriculture but with seaport type industry and general industry. The Pee Dee is the last section on the map and it is the tobacco growing area of the state--heavily rural and steeped in working with the sod.


N.C.
NORTH CAROLINA
GEORGIA
Cannon
Easley
Oconee
G'ville TB
McLawhorn
A. Bennett
St. Francis
Hillcrest
Shriners
Stroud
GGH
S'burg Gen.
M. Black
S'burg TB
Woodruff
Cherokee
York
D. Savior
Chester
W. Thomson
Hope
Williamston
Anderson
Bailey
Laurens
Abbeville
Brewer
Self
Newberry
Fairfield
Columbia
Providence
S. C. State
S. C. Bapt.
S. C. San.
VA
Marion Sims
Chesterfield
Kershaw
Lee
Wilson
Byerly
Marlboro
St. Eugene
MarionCo.
Mullins
Martins
Finger
McLeod
Saunders
Bruce
Tuomey
Shaw AFB
Loris
Conway
Ocean View
Clarendon
Johnson
Kelley
Williamsburg
Georgetown
Aiken
Barnwell
O'Burg
Bamberg
Berkeley
Dorchester
Baker
Roper
McC-Banks
Allendale
Hampton
Colleton
Pinehaven
Med Coll
St. Fran. X
Ridgeland
Beaufort
1= Less than 25
2= 25-49
3= 50-99
4= 100-199
5= 200-299
6= 300-399
7= 400-499
8= 500 and over

Now, that you have the topography and the area variation in mind, let me share, with you our approach to the placement of health education centers and their utilization.

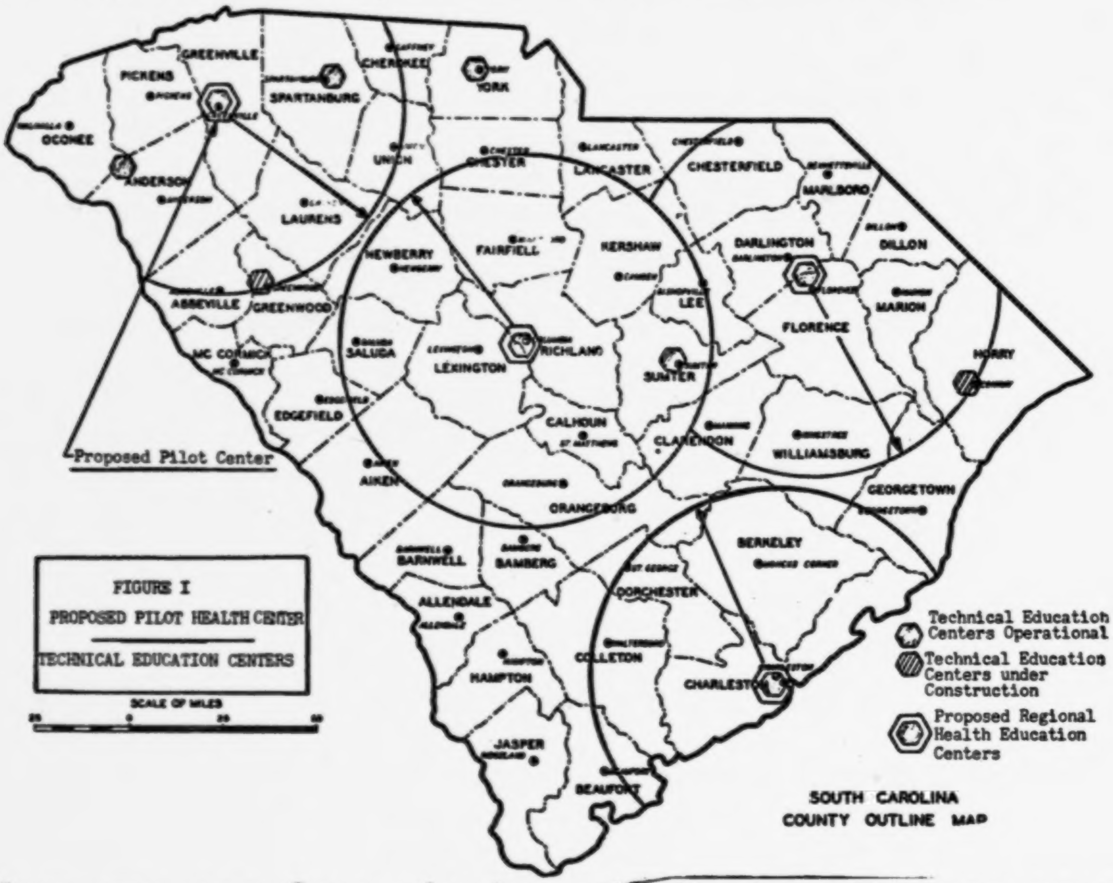


FIGURE I
PROPOSED PILOT HEALTH CENTER
TECHNICAL EDUCATION CENTERS
SCALE OF MILES
Proposed Pilot Center
Technical Education Centers Operational
Technical Education Centers under Construction
Proposed Regional Health Education Centers
SOUTH CAROLINA
COUNTY OUTLINE MAP
OCONEE
PICKENS
GREENVILLE
SPARTANBURG
CHEROKEE
YORK
ANDERSON
LAURENS
UNION
CHESTER
LANCASTER
CHESTERFIELD
MARLBORO
ABBEVILLE
GREENWOOD
NEWBERRY
FAIRFIELD
KERSHAW
DARLINGTON
DILLON
MARION
MC CORMICK
SALUDA
LEXINGTON
RICHLAND
SUMTER
LEE
FLORENCE
HORRY
EDGEFIELD
CALHOUN
CLARENDON
WILLIAMSBURG
AIKEN
ORANGEBURG
GEORGETOWN
BARNWELL
BAMBERG
BERKELEY
ALLENDALE
DORCHESTER
HAMPTON
COLLETON
CHARLESTON
JASPER
BEAUFORT

Here you see four circles serving a geo-state area, each designed to utilize all of the area's particular and peculiar attributes. As mentioned, the Piedmont area is our first attempt in developing a Center. Therefore, it is our pilot project. We chose this section of the state because of the following factors:

(1) It's the fastest developing area in the state.

(2) The people, the leaders, are the most progressive.

(3) The best teaching hospital is there.

(4) The other hospitals in this area have agreed to work cooperatively with such an education center.

Also this area more than any of the others melts the geo-regional concept that is nationally prominent. (A working agreement has been obtained from the areas to be served in Georgia and North Carolina.) It is hoped that this health education center will be in operation by June of 1967 and will be offering eleven initial programs with four additional programs by the end of the year. This area approach, as conceived, would be more than an academic education center designed to develop health personnel. It is hoped that the center would serve three functions:

(1) The rallying point for paramedical and non-licensed health occupations, and identity structure, if you will.

(2) The core for consultation and research in academic and clinical education, both within the center and the clinical setting. (It is conceived that each hospital or clinical setting would become a satellite center for the education and training of health personnel and the health education center would become the consultive and research resource.)

(3) The continuing educational center for all health personnel - be they physicians, nurses, housekeepers, food service workers, etc. - truly a center for health education in its broadest concept.

In South Carolina, a relatively rural state, we conceive four such centers serving the geo-state needs--one in the Midland where our seat of government and the state mental hospital is, one in the Lowcountry in conjunction with our medical college, and one in the Pee Dee with its heavy rural implications. Four centers such as these would and could involve research and evaluation unique in their diversity and beneficial to the nation as a whole. This is our belief and our hope.

Nationally it has been proposed and now it is anticipated that the future of health education centers is just around the corner - how else can we relieve the health manpower shortage that Medicare has so definitely pinpointed as the number one problem to adequate health care in the United States. States and regions make up this great country of ours and it is our responsibility to show, tell, and sell the economy and efficiency of health personnel preparation via the health education center concept. It is hoped that the demographic, the geo-regional and the geo-state aspects related here have given you the aim and desire to go forward and show, tell, and sell in your own backyard.

POLITICAL

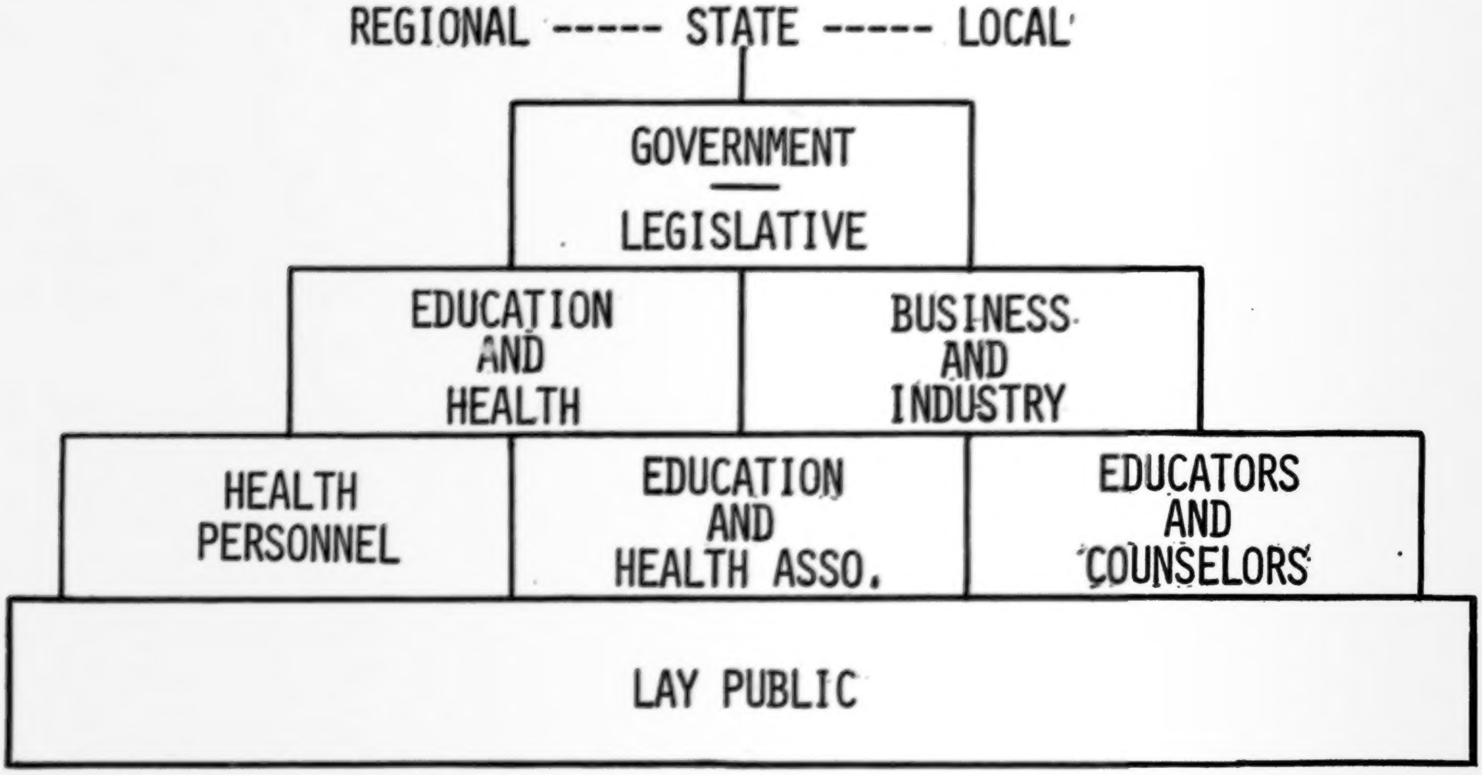
Political or legislative happenings have been the sleeping giant of the past two decades. More legislative commitment to aid man's needs has come to us during this time than any similar period. Yes, there is truly an awareness of the public's needs both at the federal level and the state level. "State's rights" is a check and balance on the federal system and it is needed. But what's needed more is a partnership, a balance of power, if you will.

On professionalism, I wish to state that within the health and education field it can be the stone around your neck by which all of your efforts can be lost - unless you recognize it - challenge it and utilize its power.

These factors of conservatism, pride of ownership, controlitis and status phobia can be difficult to surmount, but used intelligently they can work for your program rather than against it.

Even with this awareness and the foresighted legislation there is the struggle for power--the struggle of some to maintain what they have and a struggle of those who "have not" to make a reasonable wedge into the power structure. The concept to be presented here is not the "gaining of" or "making a wedge into" the power structure but how to utilize the power structure in your state (region or local area) to gain acceptance for the health education concept.

POWER STRUCTURE


REGIONAL ----- STATE ----- LOCAL
GOVERNMENT
LEGISLATIVE
EDUCATION AND HEALTH
BUSINESS AND INDUSTRY
HEALTH PERSONNEL
EDUCATION AND HEALTH ASSO.
EDUCATORS AND COUNSELORS
LAY PUBLIC

The power structure on any level, in this case the state level, is bound up in the governmental or the legislative hierarchy. I learned the route by which to assure reasonable success is through the power structure. For instance, it took me, as director of a special project of the South Carolina Hospital Association, thirteen months to get my division chairman to arrange a meeting with the governor in order to relate to him our needs, our plans, and his involvement. As a result of this meeting we ruffled some educational feathers, got a flurry of activity, and then it died down. It took another four months to get my people to realize we needed to get to one particular senator--here we got action with a capital "A." The center in Greenville, S. C., is now fairly well assured.

Recognize that one does not sit still waiting to get to the state legislative power structure. You must work at all levels by talking, selling, showing the worth and value of your concept (and this is true whether it is health education centers or anything else). Therefore, your next broad base is the education and health power structure along with the business and industry group. These are the people who control the purse strings in education and the decision making in education and health concepts. These are those individuals who have the ear of the legislative group, i.e., the power structure behind and in front of any state legislative endeavor.

The third foundation by which you can utilize the power structure is that level at which there are the "working troops" so to speak--the semi-officials, the professionals, the specialists, etc. This category, as you can tell, is made up of all health personnel that maintain a voice in their professional and work organizations, the educators and counselors, and both of their collective associations.

Of course, the lay public should never be forgotten, since they pay the majority of the taxes and in some cases vote on the issues that give the power to the power structure. The emphasis here is on telling the story via mass media under the direction of a competent public relations staff or firm.

Power structure then is a moving force which we should learn to utilize--use rather than abuse. Because if your idea is of value--and the health education center concept is--those in the power structure want to be involved. How else can they maintain their position? Remember, others "want in" so those in power are willing to work with concepts that have worth, value, and public acceptance. This you and I must show, tell, and sell as far as the health education center is concerned because our end product does have worth and value.

In conclusion, let me leave you with this thought, of all the factors listed here in this paper the one factor that can contribute more than all of these is your personal, consistent dedication to a concept that is right and beneficial. Little more need be asked of any man or woman.

COORDINATION AND COOPERATION IN COMMUNITY EFFORTS TO PREPARE MANPOWER FOR THE HEALTH SERVICES

COORDINATION AND COOPERATION IN COMMUNITY EFFORTS TO PREPARE MANPOWER FOR THE HEALTH SERVICES

by

Martin A. Paley

It is a distinct pleasure for me to meet with you today for the purpose of discussing the nature of our program in regional planning. Further, I find it particularly important that I have the opportunity to understand the nature of your work in helping to develop one phase of the resources needed to meet our health needs today as well as in the future.

My responsibilities as a professional in the health field relate directly toward helping to conduct a regional health facilities and services planning program for the nine county Bay Area in California. Our community of the Bay Area is composed of some four million people and is expanding at the rate of approximately four percent per year.

We have in the neighborhood of 110 general hospitals representing close to 20,000 in-patient beds. We are just opening our 400th nursing home which represents approximately 15,000 long-term care beds, and these are matched with a proper complement of psychiatric, rehabilitation and other health facilities and services.

We have seen the rapid expansion of population. We constantly confront the question of how to distribute our scarce human and physical resources to do the most effective job in providing health care for people.

Our program was initiated by organized hospitals in northern California who, with the assistance of federal funds, undertook the establishment of a consumer oriented planning agency broadly representative of the community. After many months and many conferences, we were able to develop such a planning program and were incorporated as the Bay Area Health Facilities Planning Association in December of 1963.

There are some sixty such organizations scattered throughout the United States, usually in metropolitan areas, all concerned basically with qualitative and quantitative factors related to health services. It is a new movement with the intent of helping communities understand and assume responsibility for a vital aspect of public service, namely hospitals and related facilities.

The nature of our program is such that we work with individual communities through citizens' groups organized usually at the county level. Each of these citizens' groups meets monthly and studies the problems related to the needs for health services and facilities, and works with the various interests to assure that these needs will be adequately met.

We are also formed on a regional basis cutting across the nine counties of the Bay for the purpose of assuring that regional needs will be adequately considered when a new project for a hospital or a related facility is undertaken. The cooperation that we have enjoyed to date from the professional groups of hospitals and medicine has been most encouraging. We find, too, that given an opportunity to work together, individual communities can shed their traditional provincial attitudes and combine forces to assure a sound network of health care services.

The community organization process which marks many of our activities around the country today, from politics to establishing Little League baseball teams, was crucial in our development, and continues to mark the most significant phase of our activity. We find that to do a job effectively, we must involve a wide cross section of people. Further, these people must not be just involved on paper or be attracted to meetings where they sit and listen. Each and every person whom we work with is encouraged to familiarize himself with the problems facing the community related to health and to express his views on the way that he thinks those problems can best be solved.

In our program, we have chosen to approach regional health facilities planning on fairly broad basis, so that we have enlisted people from the major fields of commerce and industry, and labor. We have enlisted people from the professions of nursing and hospital administration, of medicine, of nursing homes, and others. Our board of trustees at the regional level, however, does represent a bias--a bias in behalf of the non-professional, or consumer, rather than the provider of health care. Our board has restricted its membership, which now numbers some 28 persons, so that not more than one-third of its composition can be made up of persons making their living in the heatlth service professions.

We began our planning with a somewhat narrow interest, focusing largely on bricks and mortar--an interest that looked only at beds and the number of beds that a hospital developed. We found that this was quite shortsighted and inappropriate to our long-range task. We shifted then to patient needs and the interrelationships between various stages of illness, as well as the kinds of service required.

We have broadened our approach in terms of regional planning for health facilities so that we are primarily concerned at this stage with the services that we have available in our communities, and really secondarily concerned as to how they are housed. We find that we have some outstanding health service programs being offered in rather antiquated buildings, and although we are not satisfied with the adequacy of the physical structure, we know that this is just one aspect of the quality of service, and is usually not the most crucial aspect.

We face the same kind of manpower shortage problems that other communities face, perhaps exaggerated a bit by our rapidly expanding population and our highly mobile communities. We find that we have brand new hospitals that are unable to open all of their facilities because they cannot attract an adequate number of qualified personnel. We find others that are having to close down sections of their institutions because an adequate number of trained people is not available. I think we have only to look at the front page of the Wall Street Journal this morning to recognize that there is a ferment with regard to health manpower. Part of it is numbers, part of it is training, and a part of it is adequate consultation.

As I left the Bay Area yesterday, the threat of strikes hung heavily over many hospitals as the nurses were beginning to express some feelings about how they fit into the hospitals. They were wondering how the hospital looks upon the registered nurse who is paid substantially lower than the gardener. This is an imbalance that has persisted for many years in the health field through no fault of any single group. It has just grown, and, at least in our area, I think, will change dramatically, In this change, it can't help but affect the vast army of other kinds of skills, semi-professional personnel, who assist the hospital in providing patient care.

I think the economics of health care are going to be in even greater disarray then they have been in the past before things settle down. Certainly the issue of wages as it relates to the payment of people working in the health service professions is up for a good deal of consideration.

We do have provision in our program for a series of technical advisory committees. As I indicated, we feel that the predominant force in policy formation must be oriented toward the consumer or non-professional, but in order to assure that we have sound technical consultation to a board of laymen, if you will, we have procedures for a series of technical groups made up solely or professionals. A group of hospital people, with the dean of a school of nursing and the vice-president of a pre-payment program and a local county health officer constitute our Technical Advisory Committee for Hospital Facilities.

We have another group made up of outstanding practicing physicians in our community. While we have not activated one of our technical advisory committees on recruitment and training of health personnel, the forces which face us in the Bay Area today are bringing this phase of our program into sharper focus and are requiring that we reconsider our program and perhaps shift our priorities in favor of manpower development.

I would like to share briefly with you, if I might, what we consider to be four basic steps in our planning process. They are relatively simple. They may or may not serve as guidelines to you as an administrator or teacher, but I will offer them to you as our formula for regional planning.

1. Collection of data
2. Development of need estimates
3. Provision of consultation
4. The process of project review

A brief rundown of these will give you some examples of what I am talking about. Basic to any approach in community planning is the inventory of resources. This is carried out by each and every regional planning agency in the country.

While in the past we have inventoried and analyzed utilization figures of our health facilities, we are just now coming to the task of an inventory of the centers for training of health personnel in the nine county Bay Area . We were dismayed to find that no adequate listing existed which would reveal where personnel are being trained and in what numbers. We know pretty much where physicians are being trained because the medical school stands out, and we have a good understanding of where registered nurses are being trained, but beyond that, the schools, government institutions, educational programs, hospitals and proprietary agencies exist in such numbers and are sometimes so inapparent and unobtrusive, that we find it takes a good deal of original thinking to come up with not only the names of the organizations and the programs sponsored, but something about the personnel that are being turned out and the projections over the years.

Other studies which have marked our type of regional planning have to do with utilization information, the demand for care, and changes in population characteristics. One study of some interest to our group was an analysis of 47,000 patients admitted to 101 general hospitals in the nine counties to understand the nature of the patient, his needs, where he lives, and how far he must travel for health service. This study also helped us to understand the interrelationships of communities and the dynamics of the health care system in our area.

We do, then, collect and maintain a body of information that we may get from secondary sources such as the Health Department, or the Department of Finance. We essentially beg, borrow and steal all sorts of reliable information and collect it only as a primary effort when it is not readily available. In this way we attempt to reduce duplication in studies and surveys in this field, and drain valuable man hours.

The second area of our activity has to do with estimates of need. Here is where I think our interests and yours begin to overlap rather substantially. We are constantly trying to determine what the need for services may be today, what they will be five or ten years hence. Many formulae have been examined and employed in order to carry out such estimates. It boils down to a balance between quantitative judgments and personal judgments about what people want in their area. Whereas one community may want more hospital beds per person and a higher ratio of professional personnel, another community may feel that it can get along with a lower ratio of resources. But the individual community, after examining and studying its needs, and the costs involved, should be in a position to make this decision.

Usually our estimates of need are really estimates of demand, and I am sure that you are familiar with this concept. What we are looking at, by and large in the health service field, is what people are asking for. When we look at the need for hospital beds, we base it on some method which examines past experience for hospital beds, projects this into the future, and only to the extent that we are able to have a better understanding of illness patterns in communities, can we begin to anticipate morbidity characteristics of an area--can we then be really dealing with the concept of need.

This is true, I am sure, when you estimate the demand for certain kinds of personnel. The need for personnel in the health field is largely based upon the experience of facilities and services and the demand for certain kinds of skills. This is a legitimate approach, and one where I think we can share information and carry out cooperative efforts between facilities and services planning and manpower development and planning.

Planning is, by necessity, a continuous process. We are developing estimates usually on a county-wide basis, and even some estimates on a regional basis for certain types of services. I would only indicate to you that this has been done for medical service job opportunities in the San Francisco area by our Department of Employment. They have taken a large list of skills in the health field and have carried out surveys to determine what the demand for these skills are now, and what they will be in the next ten to fifteen years. If you are interested, our Department of Employment has these surveys available. The title of the document is "Medical Service Job Opportunities," published in July 1964 by the State of California Department of Employment.

In addition, then, to the collection of data and the estimates of need, we carry out an important function of consultation--consultation with responsible community agencies to help them understand how to carry out long-range planning. We are able to provide these organizations with profiles of communities, projections of population, trends in the medical and health fields, and proposed developments by other facilities in neighboring communities.

We are able to develop figures which show that the people in San Francisco are generally older than people living in surrounding suburbs--that about 14 percent of the people living in San Francisco are over the age of 65. We can supply hospitals, for example, with this type of community profile, and tell them something about the characteristics of age, income, and job classification. We can tell them about the people who use their hospitals--things they might not know just by using their own data. This form of consultation is sometimes referred to as borrowing a man's watch to tell him what time it is, but it is the kind of role that a planning agency can play in a subtle fashion, and by this process, raise questions and encourage facilities to do a better job of examining their role in the community.

This phase of consultation is probably the most crucial aspect of our work. We sit down in a quiet fashion with responsible representatives of the facility, before that institution becomes committed to a particular activity, and work with them in drawing reasonable plans which are comprehensive enough to meet the needs of the area.

The last phase of our activity is the review phase where we offer a judgment on behalf of the community in terms of a project proposed by an individual facility. If we have done an effective job as planners, the review stage is likely to entail little conflict. To the extent that we have not been successful as planners in working with an institution or agency with regard to the development of a particular service, then conflict is likely to arise. There is likely to be animosity and hard feelings, and the hospital will never be in the fold of community planning.

The principle here is early involvement, early consultation, and the provision of a direct, positive, helpful service. We are able, on most occasions, to suggest simple modifications here or there that make a plan appropriate to the community need. We can then endorse that plan and indicate to major funding sources the desirability of this program, and the fact that it should receive broad support and backing.

Essentially, planning is the development of a system of values--what is important, and where are we going? Our initial values were related to the quality of health services and what they cost. Although these values were limited, they allowed us to get off the ground. Following the development of these ideas, we were able to draft certain objectives in terms of these values.

What would be the purpose of our organization? We worked out a program of how we could carry out our planning activities pretty much as I have described them above--the policies of our organization in terms of how the program operates, the people who are involved, specifics of size and location of facilities, and other related matters which might be appropriate--all leading to the issue of standards.

What are the acceptable levels of activity or guides for function? This can relate both to the quality of people and their experience in planning within the community--their knowledge of a wide range of community needs and how to get things done. We have policies and standards which deal with more than technical aspects such as size and location, but are standards which assess the full operation of the planning effort to make sure that our work is not just a Tuesday afternoon meeting club where people get together and exchange fishing stories, but rather is a group that the community can look to, respect, and expect to guide their future destinies with regard to health service.

It appears that as we look at the matter of preparing people with special skills for the health service field, that there needs to be a pretty clear understanding by the educators and by the people who use the products that the educators turn out, each with the other's frame of reference. How familiar is the educator with the hospital for which he is training personnel?

It seems to me that the very nature of the educator's responsibility suggests a future orientation. He is concerned with the class that he is turning out next summer--the class that will take on responsibilities in the health field. Most health institutions that provide patient care, certainly the hospital, which will use the bulk of these people, are "here and now" oriented. They are concerned with meeting the emergent problems of the patients who are in the hospital today. It is important, then, in planning an educational program, that the educators appreciate the hospital's orientation, and in a like manner, that the hospital understand, appreciate and support the educator's orientation.

We find that it is very difficult for a hospital to do much in the way of long-range planning. This is one of the reasons why planning agencies have come into being. In general commerce and industry, we find that a corporation which expects to stay alive and compete must think several years in advance, commit resources to this kind of long-range planning. Hospitals, at least in many communities, have not had the capacity nor have they been oriented toward this future need concept. Perhaps this is one of the reasons why we have the problem of obsolete physical plants.

We have the problem of personnel shortages because the problems of today are so overwhelming that administrators of our major metropolitan hospitals have just not been able to undertake this other aspect of their responsibility. Do you, as educators, for example, have a set of values, objectives, policies, and standards which you can provide to the hospital for a proper comparison and communication? To the extent that we can identify overlapping areas of interest between the educator's program and the institution or health care facility's program, we will be able to meet with substantial success.

It appears that there has not always been an open-arms response to setting up a new curriculum or designing a new program for a new type of aide or assistant. It appears that there sometimes may even be resistance by the profession or the institutions themselves. We have been able to identify in our community some dissatisfaction on the part of certain hospitals in connection with the students who come out of a nurses' aide program. Some hospitals feel that the school has not done an adequate job of understanding what the role of the nurses' aide will be, so the hospital administrator grumbles.

The school puzzles as to why it doesn't get a better response, and why, when it sends out a questionnaire to the hospital asking about manpower needs, it doesn't get an immediate reaction. The lack of understanding between the source of development of these skills and the eventual user, I think, needs some immediate attention, at least in our community. I believe that there are some people who are becoming aware of this, and investing time and energy to iron out the differences and to enhance the areas of overlapping interest.

Our planning agency has just begun to involve itself in health manpower. We are carrying on a study which will help to identify the sites for training, as I indicated earlier. Our findings, in conjunction with the Department of Employment's projection of need, can be welded together to promote or to assist the junior colleges, vocational schools, state colleges and universities in expanding and strengthening their programs for health service personnel. It is our express purpose to assist agencies such as this as they move out to meet the needs of our communities. I think through the involvement of our board and our local committees, as well as the professionals from our technical advisory committees, that we can provide direct assistance.

The concept which was included in your advance brochure of "The Center" presents an intriguing challenge to all concerned with health care. It is not clear whether the thought you have in mind in advancing the concept of the center is that of a single campus under single administration or whether you are prepared to think of a multi-locational program with some distance between the physical settings.

I would see a counterpart in the community mental health center concept, where federal support is available when certain very clear guidelines have been satisfied. If a community, for example, can tie together at least five basic services, it can qualify for construction funds for a community mental health center. Initially it was thought that such a center would be under one roof, but it is now recognized, and at least considered possible, to use existing resources in a community, organized in such a fashion that a network of interrelationships is established, allowing a combination of the hospital, residential treatment center for children, outpatient clinics for child guidance, Family Aid Society, and other related interests. It is apparent that these ties bring together a group of professionals and services that have a common interest in the patient at various stages of the patient's need, and it does not appear to be essential that they all be administered by one central agency.

It appears to me that this may be analogous to the concept of The Center for Vocational and Technical Education in the broad field of health service. I truly hope so because I think it would take maximum advantage of existing resources rather than requiring that new programs be established with perhaps duplicating characteristics. We cannot afford to waste a single man hour or to operate at less than full capacity if we are to meet the demands for health manpower today and in the future.

It has been intriguing to me also to raise the question concerning the vast array of skills that you are promoting and developing in your schools around the country. How familiar are the people, whom you are training, with the other skills that will be carried out on the job in the institution where the person will be employed? How much does the person working in x-ray need to know about the person who is working in surgery?--these two people ostensibly graduating from the same school as aides or assistants. How much does the dental assistant need to know about the work of the medical assistant?

I think that sometimes in planning coordination, we overemphasize the issue of interrelationships and force the issue on everybody without examining the concept on its own merits. Where people will be sharing responsibilities, working with the same professionals in the same area, and with the same kinds of problems, a clear understanding of each function and responsibility is essential, but where these characteristics are not present, orientation to the other man's job really doesn't have much of a pay-off, and we may be wasting people's time, just because "coordination" is a nice sounding term.

On the other hand, proper understanding can be essential. I recently attended a conference on hospital design. One of the leaders in this field, a consultant out of New York, Mr. Joseph Bloomenkrantz, was talking about designing a hospital, not so much in compartments, but designing the hospitals so that there is maximum interchange so that various professionals and other assistants in the hospital are forced to come in contact physically with one another during the day when such contact has direct bearing on improving patient care. He believesthat this can promote, and will promote, a better team spirit, and eventually improve job satisfaction. So I think we need to examine what skills are overlapping, what skills do have contact, either physically during the day or by other means of communication, and then include in the training period, an understanding of other occupations and their roles.

There is no need to discuss before this conference the problem of unfilled positions in the health field. Perhaps all we need to know is that the need is much greater than we can handle with our present programs or even our projected programs in the several years ahead.

I hope that the programs you are preparing, the divisions that you represent in your various schools, are not only promoting the development of new skills, new fields, but that you are constantly evaluating some of the old ones. There is a danger, I think, a human danger, in adding new fields without examing critically whether the person whom we trained ten years ago is outmoded. We may be trying to force a professional skill, or a sub-professional skill, on a health care institution when it is no longer appropriate to the program of that institution. I think we need to examine whether to drop off curricula that may be no longer needed in our field.

We are aware that as the job market becomes tight, leadership will turn to machines, and whereas this is in some degrees a sad commentary on the ability of our society to respect the human factor, it is, in fact, a reality. There are unions, for example, who screamed and hollered about automation, but just couldn't stand up against what was an inevitable onslaught. In some cases, for example, the longshoremen were able to work out with management a reasonable way of introducing automated services, so that industry as a whole benefitted, and management as well as labor, were able to realize the fruits of these changes.

Some of the aide and assistant positions in the health field have been established largely as a means of getting people to do the distasteful jobs in health care. This process of grouping the undesirable functions into new skills categories could pose a real danger toward recruitment and training. I think it could be very unsatisfying for a person to enter a field if he knows that this is the cast-off of another field. I was reading recently in one of our important reports called "Health Care for California," published in the American Journal of Public Health, Vol. 48, August 1958, page 1052, where Mr. John L. Caghey discussed "Auxiliary Personnel in Medical Practice." His quote is as follows:

> *"Use of auxiliary personnel should not be based on the idea that delegation of function is done only to save the time of some mythical paragon who could do every job magnificently if he were not busy doing something else important. Positive emphasis should be placed on the need for many people with a variety of aptitudes, skills and background, to do the many different tasks that contribute to comprehensive health service."*

We all see the hierarchy of skills that are developing around the nursing profession. It appears that as a new sub-category of nurses' aide is developed, then everybody can unload some segment of dissatisfying service to the group below. I would suggest that this cannot long continue, nor can you expect to attract those people into a field where they will be accepting someone else's castoffs. In order to build a spirit and a feeling of participation on the health care team, we need to identify special skills, help people understand that they are specially equipped, and that perhaps some of the things the nurses' aides are being trained to do, the RN of yesterday really never was adequately trained to do. She just kind of picked it up on the job. Perhaps then we can help the nurses' aide or the x-ray assistant or others, to feel some responsibility in the kind of employment undertaken as well as a pride in workmanship.

There are, it seems to me, two other major factors which are affecting health service, and therefore affecting manpower. Medicare is obvious to us all. Despite the fact that there were prophets of gloom who saw long lines in front of each general hospital on the second of July 1966, at least in our communities, this hasn't occurred, and business, as usual, is pretty much the by word. Someone said on television recently, "Hospitals are really not fun houses, and people aren't breaking down the doors to have an operation," so whereas the volume today has not been substantially altered by the onset of Medicare in the past couple of weeks, we can, I think, expect a rise in the overall demand for care gradually in the years ahead.

Perhaps more important, Medicare has identified qualitative standards, and has further identified specialty skills which are going to bring into being a greater demand for manpower. Two years ago, none of us would have expected that a federal health insurance program would have built in such a strong component for home health services, and yet, here it is. And what community is prepared to give 100, let alone 200, days of in-home health care to its people over 65 if even 10 percent of them asked for this, or even 5 percent of them? We do have a challenge confronting us as the result of Medicare legislation in terms of demand for new kinds of health care services.

We find that some of the legislation that is yet to really take effect, such as the Heart, Cancer, and Stroke program, is going to promote the demand for new technicians in the highly skilled fields of medical physics, medical electronics, and others as well as people who are skilled in basic educational fields, because essentially, this is an educational program. Whereas the heart, cancer, and stroke program was initially looked upon as an education for physicians, all persons working in the health field must play a key role in this new legislation if everybody is to advance at the same pace. Otherwise, we may develop a physician who has moved beyond his team, and can no longer count on them for up-to-the-minute support across the board.

Modernization of our metropolitan hospitals is a problem which will be dealt with by legislation in the very near future, and could result in a brand new design, a brand new system of patient care. How we adapt manpower to these new systems is one of our greatest challenges. There will be all kinds of new monitoring equipment, as well as new accounting equipment for administrative purposes. Our ability to provide the skills for these fields is important and crucial. We find that in our area, new skills on a professional and sub-professional basis in the fields of mental health and psychiatry have developed--case aides, social work and psychiatric technicians have come into being, and these are just a forerunner of what we can expect tomorrow.

The coordination of educational programs directed toward preparing people for health service occupations should be a major concern for you today. For as each of you promotes the development of new classes, new curricula, you can fully justify your actions in terms of community need. We run the risk in unilateral action of not taking maximum advantage of each other's experience. We run the risk of setting up individual advisory committees or health manpower councils for our own individual purposes. I would suggest that most communities could set up a single advisory committee taking advantage of the top flight physicians, hospital administratiors and other professionals to serve as an overall general curriculum consultation vehicle to which each junior college, vocational high school, state college or university can turn in seeking expert advice and consultation on preparing professionals or sub-professionals for health service jobs.

A curriculum coordinating technical advisory committee for your community could have many other side effects. It could bring on, to such a body, major civic interests who can help you with your college or school trustees in advancing the cause of health occupations curricula development. Where money becomes a problem for either faculty or buildings, a technical advisory committee which includes bankers and labor leaders can sell the school authorities more effectively than the vested professional interests. I urge you to give careful consideration to the formation of such technical advisory coordinating councils, and can assure you that where health facilities planning groups exist, you can count on them for assistance in the organization and development of such vehicles.

Again, my deep appreciation to you for allowing me the opportunity of attending this conference. You have stimulated my interest to work more diligently to assure an adequate supply of qualified personnel for our health care institutions. Your kind attention has been appreciated.

APPROACHES TO RESEARCH

POTENTIALS AND APPROACHES TO RESEARCH IN CENTERS FOR HEALTH OCCUPATIONS EDUCATION (HOE)

by

Robert M. Tomlinson and Elizabeth Kerr*

INTRODUCTION

The title of this seminar, Health Occupations Education Centers, would indicate those attending this meeting, and likely many others concerned with the health field across the country, have a preconceived idea or concept of what is meant by the term "HOE Center." Though unable to attend all sessions to date, the most firm impression I have gained at this seminar is that the term "Center" is a commonly used term, yet each person has a different perception of definition of this term.

With the indulgence of this group, I will attempt to depart from the topic as listed in the program and give attention to some features of an HOE center including a definition and some idea of a comprehensive health occupations education center as we have defined it. To my knowledge, no one at this seminar has attempted such a definition. It would be presumptious for me to imply that my definition is the best or only one. However, I think it necessary that someone propose the nature of a comprehensive HOE center so that in our discussions some references, comparisons or evaluations based on a commonly accepted definition, may be achieved.

Mr. Frazee has given us a challenging paradigm of the developmental and operational functions of an on-going health occupations research project or activity. Other speakers have described the operation of their particular programs or "Centers." A number of the components of a center have been described in various terms as was appropriate to the individual situation or person making the presentation. It is most encouraging to see the interest, effort, initiative, and innovations exhibited at different locations across the United States. I think we would agree, however, that we are really just scratching the surface. There seems to be one most common element across all presentations and program examples given to this time. Almost all have evolved because of a particular interest of an individual or association to meet a local or regional need. The structure and operation of each activity is in line with the needs and background of that particular location. This principle of local involvement and compatibility should be applicable to all types of programs and centers.

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*This presentation was made by Mr. Tomlinson at the Seminar on Health Occupations Education Centers and is based on material developed by the Co-Authors.

In the presentations and discussions at this seminar the term "Center" has been used to describe activities at four distinct levels: (1) a single health occupation training program such as practical nursing, dental assistant or other; (2) a local "cluster" of training programs involving two or more health occupations such as nurse aide, practical nursing, operating room technician and/or some additional areas; (3) a specialized medical-health complex usually associated with a university medical campus; and, (4) an administrative unit such as a state RCU or health association which may sponsor or conduct surveys or limited research.

Each of the above levels of "Centers" serve a valuable role in the total program of health occupations education, but a sizeable number of each will not be adequate to the total task. We will need many at each of the levels and, additionally, a few fully comprehensive centers of the type we would like to propose later in this presentation. They would provide the leadership, coordination, and specialized services not possible in the more limited locations.

There is one other point that should be made in reference to programs or centers at different "levels." A distinction must be made between "level" and "quality." A lower level program can have high quality. The reverse is also true. The present need is for high quality programs at all levels.

CONSIDERATION FOR RESEARCH IN HEALTH OCCUPATIONS EDUCATION

Before proceeding to the description of a comprehensive HOE center, I feel I must give some attention to the topic I have been assigned.

At the present time the status of research and our collective pool of scientific data on health occupations is at a low level. We are accumulating many isolated types of studies most of which are based on impressions gained by experienced people in the field or by informal checks on individual programs. Most would have to be classified in the category of "action research." This type of research should be encouraged and extended.

In other areas fairly sophisticated approaches to research in this field are being utilized. Examples of this type of research would be the learning studies utilizing programmed instruction or computer assisted instruction applied to a specific content area. To make the best use of what is now being attempted, we must have a better structure for exchange of information and deposition of data collections so that they may be compared and extended at more than one location.

The person who attempts research in the health occupations field today is almost forced into one of two types of approaches. They may use a "shotgun" type of approach in gathering base information in the anticipation that a problem can be better identified and limited for further study, or they may approach a very specific problem in a relatively sophisticated manner. We simply do not have adequate data and experimental bases to do adequate research in between these two extremes. Research in any field must progress with these types of approaches at first. It is only when a relatively comprehensive base of data has been developed and can be related to many aspects that we can then proceed with the intermediate type of research that will be most fruitful to the operating programs.

We have examples of many different types of research in progress at the present time. They would include: (1) demographic or socio-economic, the description of personal and social characteristics of individuals and their situations; (2) curricular, the study of educational programs and their organization and methods; (3) conceptual, designing and overall structure for the learning situation or in the meeting of needs of a total field or operation of interrelated programs; (4) experimental, a comparative study of two or more methods, groups, abilities, or other variables; (5) longitudinal, the following of a group or criterion over time to note changes and influences; and, (6) projection or predictive, the making of estimates of future action or changes on the basis of currently available data in comparison with prior happenings. Few studies fall clearly into one or another of the above categories.

In almost all cases we are concerned with three stages of investigation. First is the antecedent where we have some measure or evaluation of a prior situation. This might be the individual abilities or characeristics of students before they enter a training program. Second is the transcendent (or treatment) activity. And, finally, we have the outcome.

In all cases we are attempting to determine the original or base situation when we started, what happened in the interim and what kind of results were produced.

Each of the above three stages might be classified under the general heading of descriptive research; that is, we identify criteria, variables, or other conditions at each of the three stages. We can also describe the action that was involved. Correlations or other relationships may be determined between antecedent, treatment and outcome. Reasons for these may be speculated or determined through appropriate design and analysis. In some cases, this can be a status type of research; that is, a report of what is or was at a given time.

A second type of action is then necessary for implementation. This is best described as a judgmental action. Choices and decisions must, or should, be made. Questions must be asked such as: "Is this good or bad? or, should it or should it not be changed?" At the descriptive level, personnel with research competencies are primary to accurate and meaningful research. At the judgmental action step, research must be supplemented by those with additional qualifications in the professional field or content area. The researcher can accurately describe what is, what happened, and the relationships among variables.

The philosophy and the objectives of any educational program must give guidance to research rather than the reverse. The professionally trained evaluator or researcher can help clarify the philosophy and/or objectives. He cannot formulate them alone.

The structure and approach must be found whereby the many activities at all levels can be coordinated into high quality activites to meet the present needs in the health occupations field. It is with this in mind that I present the following as our concept of what a comprehensive health occupations education center should be.

PRESENT STATUS OF HEALTH OCCUPATIONS

The need for some type of formal education preparatory for entry into the work force is increasingly being recognized when; looking simultaneously at health service needs and human resources to provide health workers, it becomes evident there is potential for, and merit in, a more effective correlation of human resources with employment opportunities. A much better utilization of all levels of human resources can be accomplished through suitable and adequate preparation of health service workers. It is imperative that this preparation be provided in quality educational programs administered or supported by an agency firmly committed to the educational role.

Preparation for many paramedical fields can be and is being accomplished in programs of health occupations education. Over 200 types of non-professional paramedical occupations have already been identified, others are emerging, and still others, not yet known, are predicted to be forthcoming.

Several individual or groups of programs have been established on the basis of local need and/or issues. In most cases each new program is of a type already tried in some other location and it adopts or modifies an available curriculum. Too often it is established without benefit of a comprehensive investigation to identify needs. Seldom is attention given to evaluating the total program in terms of overall quality, effectiveness in meeting needs, and optimum utilization of staff and facilities. Individual activities have led to a fragmentation of programs, duplication of efforts, and have not generally contributed to the orderly and innovative development of HOE programs. It is fortunate that needs have been met as well as they have and that existing programs are generally of good quality despite the fact there have been limited resources at the area, state or regional level which assume responsibility for their overall development, implementation and evaluation.

This responsibility has traditionally been carried, to various degrees and with little or no coordination, by multiple agencies, institutions, professional associations and individuals. The roles of each of these have emerged from traditional practices, appear to be somewhat institutionalized, and reflect their areas of specialization. Changing patterns indicate these traditional roles are undergoing re-examination and modification in order to better meet the needs. The basic roles of these groups and agencies are not being challenged. Rather, they can become more effective through the emerging structure and relationships resulting from this re-examination and modification of roles.

While recognizing marked expansion in all areas, each group is already hard pressed to find time, personnel, and money to carry out its present activities at the desired level of quality. Each group has both specific and general concerns for education, service, and research related to its own area and in many instances several groups identify some degree of concern for any given area. The responsibility for developing programs to prepare health occupations personnel at less than the baccalaureate level is such an area.

No agency, institution, or professional organization has assumed, as its primary responsibility, the role of leadership and coordination across multiple fields of preparation for non-professional health workers.

CURRENT TRENDS AFFECTING HEALTH OCCUPATIONS EDUCATION

The Economics of Education

Current studies have been initiated to compare the social, governmental, and individual investment in education with the return on this investment to society and the individual. As educational programs at all levels seek a progressively larger share of the available public resources, there are many searching and pressing questions pertaining to priorities for which public education funds will be allocated. To date, very few cost analysis studies have been attempted which would identify the most beneficial or economic utilization of public education funds in view of personnel prepared. Based on principles established in other areas and studies in this field, indications are that a larger, more comprehensive program will prove to be by far the most efficient structure.

The Changing Structure and Role of Public Education

There have been dramatic changes in the demands on the public education system in recent years. Society expects this system to provide appropriate educational programs for people of all ages, levels of ability, and interests. A significant shift in organizational structure and a marked expansion in type of educational programs are well underway in an attempt to fulfill this expectation.

Public colleges and universities have long provided the occupational preparation for the health professions at the baccalaureate and higher degree levels. A similar obligation to provide preparation at less than professional level for the great majority of our young people and adults who will not complete a college degree is being recognized in the emerging role of public education. Increasing evidence indicates a constantly increasing trend to move occupationally oriented programs administered by public educational institutions. A number of these are preparatory programs offered parallel to the first year or two of college; others, usually of shorter duration, are for retraining and/or upgrading.

The Shift in Orientation for Health Occupations Education

There is a trend to shift HOE programs from service institutions (hospital, clinic, or other health agency) to area or regional educational institutions such as comprehensive community colleges or area schools.

Simultaneously, there has been a basic change in philosophy. This philosophy embraces the principle of charging educational costs to educational institutions supported by the public tax base. Traditionally, programs to prepare health occupations personnel emerged in service institutions with a subordinate role in education. The costs of such programs have necessarily been included as service charges and therefore borne by patients. Many programs operated by service institutions have been discontinued due to financial stress. Also, the mobility of our present work force precludes the retention of those trained in a particular service institution long enough for them to return services commensurate with the investment made. Shifting the cost to a broad educational base seems appropriate and more compatible with this increased mobility of our labor force.

There are additional advantages to support this shift of HOE to educational institutions. Because of the potential size and numbers of interrelated programs, the proportionate overhead and administrative costs will be reduced and borne by education. The potentially larger pool of recruits, with proper guidance, will provide a steady flow of appropriate applicants. Also, the socially accepted objective of "going to college" can be realized and the status derived from attending this type of institution, rather than a service-oriented institution, will likely enhance enrollments.

Current Health Occupations Research

A number of research and survey projects on-going across the country are attempting to gain a sound perspective of health service needs and to determine the organization, operation, and curricular structure needed to prepare workers for health occupations. These have emerged because of strong leadership of a particular individual, association, or institution rather than a pre-determined organized pattern of development.

At least two relatively comprehensive studies are concerned with the identification of "core content" and "cluster concepts" related to curricular structure and organization of HOE programs. Robert Kinsinger, State University of New York and Arthur Lee, Arizona State University, have reports which identify core content for a number of related HOE programs, or a cluster.

A somewhat different approach, based on a survey of local employment and utilization patterns, has been initiated by Forest Park Junior College, St. Louis. It, too, involves the cluster concept as well as a "career ladder" approach to HOE programs. Major emphasis was given to the cluster and career ladder concepts at the national meeting sponsored jointly by the Department of Health, Education and Welfare and the Department of Labor in Washington, D.C., in February 1966.

The Indianapolis Hospital Association has been active in manpower utilization studies and the development of a more comprehensive HOE program based on analyses of needs and trends in their region. Probably the Pittsburgh Public School Project is producing the most comprehensive analysis of total area needs upon which to base planning for preparatory programs and continuous in-service education for the health occupations.

Multiple Agency Involvement in Health Occupations Education

Many public and private agencies are involved in various aspects of HOE but no structure exists to coordinate their activities. One example is sources of funds. Funds are coming from federal vocational education through state departments of education, from the U.S. Public Health Service through state departments of public health, and from mental health sources. The U.S. Department of Labor and the Office of Economic Opportunity also provide funds for research, service, and training in the field of HOE. Foundations have been active in supporting research projects and other activities to implement surveys and training to help meet health service needs. The Kellogg Foundation is an example. Often the funds used for a single program may be obtained from several sources depending upon such factors as type of training and type of institution.

A number of agencies including the U.S. Public Health Service, the U.S. Department of Health, Education and Welfare, the Employment Service, the Employment Security Commissions at both national and state levels, and other agencies are conducting studies which could be most beneficial to planning for HOE. Various professional health associations and agencies maintain a staff to study and identify particular health service needs. A central system to provide for exchange of information and data bank would make it possible to more adequately assess current situations and projections in order to determine changes in program expansion needs or, when indicated, the discontinuance of programs. At the present there is no means for assembling and utilizing available data to accurately make these determinations.

Multiple professional associations (nurses, physicians, dentists, etc.) assist in the initiation, implementation, and evaluation of programs. Accrediting bodies for HOE programs are generally the professional and some paraprofessional associations. Each accredits programs related to its specific field. Many educational or service institutions initiating programs must deal independently with each association because there is no central place to exchange and coordinate information pertaining to sources of funds, guidelines for program development, standards, approval and/or accreditation procedures, etc.

ELEMENTS OF A COMPREHENSIVE PROGRAM TO MEET HEALTH OCCUPATION NEEDS

The following elements necessary for a comprehensive approach to HOE are not intended to be inclusive or outlined in detail, but they indicate classifications of activities and services.

On-Going Training Programs in Health Occupations Education

The focus of any approach to meeting health occupations needs must be the training programs which prepare personnel to fill service positions. All other elements will be supportive to improving the quality and quantity of the output of these programs.

The training programs would be administered by educational institutions with cooperation from appropriate clinical affiliates. To a large degree, the personnel, resources, special competencies and activities of the clinical affiliate will determine the nature and size of programs. Average size communities may justify some programs but a comprehensive approach must include highly specialized training which necessitates a close association with a comprehensive medical or health facility. Programs of all types must be provided if a region is to be adequately served. Some educational offerings may be so specialized that a single program would be adequate to serve the needs of an entire state or even several states. A comprehensive program could serve to give direction, consultation, and assistance in planning and implementing supplementary or coordinate programs within the region, depending upon needs.

Manpower Utilization Studies and Projections

Studies on a continuing basis are necessary in order to establish current and predicted needs for health service personnel and to determine their most effective utilization in the employment situation. These studies would provide a continuous flow of information from service fields to training programs so that appropriate curriculum development and enrollments could be identified, planned and realized. Retraining and upgrading needs could also be established and projected from these studies.

Program Development and Implementation

Once a methodology is established and procedures are implemented to better determine current and projected needs, there can be more efficient planning for the initiation, improvement, reorganization, or redirection of programs. Basic procedures and methodology for the organization and establishment of programs could be developed as guidelines to be used by local and area personnel when establishing programs. Curriculum materials and evaluation procedures could be developed for utilization by both existing and emerging programs.

Because of rapid changes and emerging specialities, it would seem most desirable to establish a demonstration and experimental HOE center where new materials, procedures and approaches could be tested before dissemination to ongoing programs throughout a broader area. Dissemination of these could be achieved through workshops, conferences and in-service institutes offered for local and regional personnel.

Teacher Education

Increasing demands for health care dictate the need for a greater quantity and an improved quality of teaching personnel for existing and new programs. Teacher education should also provide for the development of administrators for those locations which offer cluster of HOE programs. To meet these demands both immediate and long range needs must be recognized.

To provide immediate relief, an in-service teacher education program must provide the educational background necessary for successful health practitioners who have made the transition from practice to teaching. These people must have the technical background or competency in their fields; but short courses or workshops on teaching methods, measurement and evaluation, and other similar "tools of the teacher" must be provided to upgrade their teaching skills.

An on-going preservice programs at the university level must prepare professional personnel to teach in existing and new programs. This type of program must be organized on a cooperative basis with existing HOE training programs serving as a field laboratory to provide meaningful learning situations for prospective teachers. Preservice teacher education must be accelerated if the present and rapidly increasing demands for teaching personnel are to be met.

Regardless of the educational background of a teacher there will be need for continuing education designed to upgrade and improve his knowledge in the field of education and in his specialized field.

Workshops, conferences, and scheduled courses (for which college credit may or may not be given) would include content on program development, evaluation, curriculum development, development and utilization of instructional materials, and organization and administration.

Instructional Resources

Instructional resources must be readily available for use by HOE programs of all types and in all locations. This is possible only when the development and evaluation of new techniques, media, and materials are kept up-dated. There must be a commitment to the development of instructional innovations, the testing of these in actual instructional situations, and the dissemination of proven innovations to on-going programs for their use.

Research on, and development of, instructional resources have economic implications. Questions being asked indicate the public expects a reduction in educational expenditures or demands reasons supporting these expenditures. For example, student-teacher ratios in the field of HOE are considerably smaller than in general education endeavors. Perhaps improved instructional techniques and resources could result in a cost reduction in this area.

The development of a truly comprehensive program must include the dissemination of new techniques and materials to those actively involved in HOE. This type of activity can be carried out through well-planned conferences, workshops, and seminars. This would assist instructors and program personnel to become aware of, and better use, the newly developed instructional materials. There is great need in this area.

THE HOE CENTER

In light of present and emerging needs, the involvement of multiple agencies and individuals, and the essential steps necessary to meet the needs in the health occupations field, HOE centers could provide the structure through which all of these aspects might be coordinated into a comprehensive approach to HOE. There has been differential development in some aspects of the total problem while others have received little or no attention. Areas, states, or regions lack a single base which provides continuing coordintion and development for the total field of HOE. Such a base, or center, would function in a leadership role but would not assume the responsibilities or functions of existing groups. Rather, it would serve to coordinate efforts and provide for cooperative working relationships between educational institutions, professional associations, local and area schools, service associations, state and federal agencies, and other groups and individuals who contribute to one or more aspects of the total field. With this organized approach emanating from a center concerned with all aspects of HOE, the needs for health service personnel could be met more adequately.

Sufficient flexibility must exist within the structure and role of a center that it could expand or extend to specific activities for a temporary period of time in one or another area and then reduce or terminate this activity.

Activities of a center would include training, research, experimentation and demonstration, teacher education, guidance and counseling, development of instructional resources, consultant and advisory services to programs, organizations, agencies, and individuals concerned with this field. A part of the research, teaching, and service aspects would involve the establishment of an area for curricular and instructional materials development, a data center and a library service for related reports available to all interested institutions and agencies. This resource area would function as a depository and dissemination agent for other studies and information produced through the center.

Because a center would essentially be a cooperative venture, working relationships would have to be based on the role of the center and the traditional and emerging role of each of the cooperating groups or agencies. The following are examples of agencies and groups with potential contributions to a center.

Universities

Institutions of higher education are currently engaged in many activities related to a center. They focus primarily on basic research supportive to the field, manpower utilization and needs, consultative and advisory services to ongoing programs, staff preparation and in-service training, supplying leadership and guidance services to selected programs in local and area schools and cooperatively relate with professional groups and other agencies, such as a state department of education or public health. Many of the above activities are undertaken on a joint funding basis or through support involving federal, state or private sources.

Because of its extensive facilities, specialized personnel and precedent of activities, an institution of higher education would seem to be the appropriate parent organization for a comprehensive center. Its research, service, and teaching roles are highly compatable with the type of activities included in the operation of a center.

Local or Area Educational Agencies

Community colleges and area schools are committed to the establishment and operation of HOE programs and there seems to be no conflict between their role and that of an institution of higher education relative to the administration of such programs.

Curriculum development, in-service education, research, and studies should be a part of all programs within the limits of their facilities and staff. It would seem advisable, however, that there be a close working relationship between educational programs and a university. This relationship could facilitate activities to provide answers for dissemination to other programs.

The demonstration and experimental program at a selected area institution(s) would be an integral part of that total HOE center and have full access to all its services and facilities. In a situation where a unique offering would need to depend upon the specialibed staff and facilities of a medical and health complex, this could be accomplished through cooperation between the institution of the higher education with its medical complex, the area institution, and the Center.

The State Department of Education

The state department of education is the official agency charged with the responsibility for coordinating activities across all public, local, and area programs within a state. It is the officially designated agency for receiving and distributing selected federal funds for education, research, and services for the health occupations field. An example of this is the use of vocational funds to provide for the employment of professional consultants for HOE. Teacher education programs must also be maintained for the staff in any areas where federal vocational funds are utilized.

Since every public training program is operated within the overall structure and policies of public education, a state department of education is involved with the total operation of HOE programs within each state. The amount and quality of services possible through the funding arrangements with a state department of education could be extended significantly if the resources of a center were utilized. Establishment of a separate division within a state superintendent's office to provide parallel and, in many cases, overlapping services would seem to be unnecessary duplication. It must be recognized, however, that the legal responsibility for providing such services rests with the state superintendent of the department of education, or a similar agency.

Clinical Agencies and/or Affiliates

Necessary clinical experiences cannot be simulated in the educational institution. Therefore, it must be able to rely on local hospitals, nursing homes, clinics, and other health services agencies to provide facilities for this purpose. Such relationships are arranged cooperatively between the school and the health agency and are established according to the purpose to be served. Individuals or groups from these agencies could work cooperatively through the center in carrying out broad surveys, studies, and research. Conferences, institutes, and in-service training could also be provided for the personnel of the clinical agencies.

Any clinical affiliate relationships between a university with a medical-health complex and the cooperating programs would be of a specialized nature. Highly specialized programs can only be established where a medical-health complex can provide the specialized clinical affiliation for the training program. In all cases the clinical affiliate would be represented in an advisory and consultative capacity to individual training programs or the training area. It is also possible that for selected highly-specialized preparation the entire program could be operated only by a medical-health complex.

Local health agencies, in carrying out their primary role of financing, administering, regulating, and providing health services must conduct programs of research, service, and education. These agencies often need to develop new programs or services to meet a changing situation. Selected aspects of this activity could be undertaken on a cooperative basis with the center; or, the center might assume particular activities for the various agencies. Many of the materials and studies conducted by the center would have important and direct implications for the health agencies. With procedures to facilitate ready and free exchange of information and materials among the agencies, the center and other groups would provide a valuable service to meet the health needs of a state. Materials developed for one might be easily adapted and readily available to other locations and agencies. For particular undertakings, it could be possible to exchange or loan professional staff personnel between the center and the agencies.

Professional, Para-professional, and Health Service Associations

Several types of associations will have an inherent and vital interest in the activities and development of a center. These include the medical, dental, nursing, pharmacy, physical therapy, public health, nursing home, hospital, and many others. Their interest and activities in the past have included assistance in setting standards and requirements for training programs, selecting and placing personnel, determining curricular content for training programs, serving as members of state and local advisory committees concerned with the establishment and direction of programs, and conducting research and studies relative to their specific field. Many of these associations have been involved in the approval and accreditation of programs and the licensing and certification of personnel. They have provided valuable consultation and direction to both training and employment agencies.

In the establishment and implementation of a center, it is assumed these associations would continue to play a very similar role. They would provide such services and assistance to individual programs and work cooperatively in an advisory capacity to give direction to activities of the center. Many with an active role in in-service and pre-service teacher education functions for prospective teaching personnel would be representaiives of these associations. Individual members are, and will be, needed to fill positions in appropriate training programs at all levels.

Other cooperative ventures could include surveys, studies, or other activities by the center with cooperative or joint funding from the professional associations and the temporary attachment of representatives to the center for particular developments in curriculum, research, etc. The center could also serve as the coordinating facility for establishing joint or cooperative activities of the associations and agencies.

FINANCING A HEALTH OCCUPATIONS EDUCATION CENTER

It is imperative that a center as described in this paper have a guaranteed and continuing source of financial support. The buildings and equipment, a central core of professional and supporting staff, and operational expenses must be established to maintain an adequate minimum level of operation on a long-term basis. To accomplish the leadership and innovative role will take a period of years. To be able to attract the caliber and range of personnel required and to establish the basis for operation in the research, service, and educational areas will require a commitment for an extended period of time..

The institution or agency sponsoring such a center must be firmly committed to the importance and support of the activities implied by the center or to limit the total center to size and aspect that can be adequately supported.

It is possible that initial funding for a short or even moderate length of time could be obtained through a proposal to an appropriate funding agency. It is unlikely that the center structure and personnel could be based primarily on such funding for any length of time. The actual allocation of funds by budget lines implies a commitment to the principle of the center, but it also indicates a guaranteed level of support between various projects and contractual activities that might be initated through the center on a more temporary basis.

Under present federal and state acts, it is likely that a significant proportion of the required funds could be obtained through outside funding sources. This would permit the actual expenditure by the parent organization to be of a relatively lower level than might have been possible at earlier times. If outside support is to be obtained in any significant degree, personnel and time must be provided for initiating and developing proposals and activities.

The actual operation of a center would emerge and function on a broader basis through the cooperative funding arrangements with related associations and agencies. This cooperative funding activity would increase and decrease as new projects were inititated, accomplished and phased out. The central operation of the center, the facility and staff, would be on a more stable and continuing basis.

Structurally, a center would operate as a semi-autonomous unit within the overall structure of the parent institution or agency. The policies, funding arrangements, and other budgetary and personnel procedures would be consistent with the overall policies of that parent organization. These procedures would have to provide for receipts and disbursement of funds through accounting and budgetary procedures under the policies of, and within, its total organizational pattern.

If the parent organization were to be an institution of higher education, a health service institution, or a state department of education, it is questionable whether they could justifiably establish and operate the actual training programs. The relative expense of operating training programs would be proportionally greater than all other expenses. It would seem most desirable that the more common types of training programs be established and operated by institutions whose primary responsibility is for such training. Funding for these HOE programs would be the responsibility of the training institution and on a similar basis as for other programs operated by the institution.

Under these circumstances it would seem desirable that a close contractual working relationship would need to be established between the parent organization of the center and the institutions operating the training programs. Joint and exchanged funding could be arranged between the center and institutions such that it would be advantageous to each.

An arrangement of this type would avoid unnecessary duplication of efforts and provide a genuine laboratory for demonstration and experimental activities. The resources of the parent institution would contribute to the quality and improvement of the cooperating educational programs.

SUMMARY

The type of center proposed is a comprehensive organization concerned with the broad aspects of the total field and is different from the health occupation education centers devoted primarily to the preparation of quality practitioners. Probably no more than one in each state could be justified and possibly only a few in the entire United States.

Although we have indicated that an agency, association, or institution could serve as the parent organization for a center, our own recommendation is that the most desirable sponsor is a public institution of higher education. The particular institution must meet the conditions as outlined above. They must also establish cooperative and contractual arrangements with one or more appropriate area institutions (such as a junior college) and one or more medical-health complexes (such as a medical school and hospital).

We do not propose that all centers would be organized and operated in identical fashion. Each must be compatible with its region and resources. The roles and functions would be similar. I would hope that we can see a move to establish at least one center of this type in the near future.

AN OPERATIONAL OVERVIEW OF THE PRACTICAL NURSING STUDY*

by

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In the health service field there is a broad range of possible occupational choices. Of these occupational areas, nursing service is one of the greatest concerns because of the quantitative and qualitative increase in functions and the increase in population needs.

Probably the greatest single change in the nursing field is the emerging role of the prepared, licensed practical nurse as a member of the nursing team. Practical nursing, as with any new and rapidly expanding group, is experiencing a great amount of confusion and misunderstanding within the occupation itself, among related occupations and throughout the general public. It is only within the past few years that a plateau has been reached in which the programs of practical nurse education and the practice of practical nursing have reached a level of maturity and stability of operation. This period of relative stability affords opportunity for research into the state of the education and practice of practical nursing with relatively maximum significance.

The general hypothesis of the Practical Nursing Study is that there exist differential and identifiable characteristics among the population of potential and actual students in approved programs of practical nursing, the programs themselves and the employment situations, and that meaningful relationships among these characteristics can be determined. A study as to the status of these characteristics and the relationship among them will make it possible to improve both the quantity and the quality of available nursing services by people who are responsible for the implementation and accreditation of the programs. It is hoped that the findings of the study will, where applicable, promote improvement in student selection, curricula, program development and utilization of graduates in the employed situation. The study is, therefore, concerned with the recruitment and selection of students of practical nursing and the programs through which they are prepared, as well as the relationships among identifiable characteristics of individuals and their success in the occupation of practical nursing.

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The majority of previous studies and reports dealing with practical nursing and practical nurse training programs have been of the census and tabulating variety. The most commonly used procedural method and approach in status or descriptive studies wherever there is an attempt to gather information from a large number of individuals has been through the utilization of check lists or questionnaires. Another approach that is quite commonly used in the health field is the case study approach where a small number of cases are involved and the interviewer records a number of notes and then transcribes and makes analyses from the body of notes taken during the interview. The Prictical Nursing Study has used a combination of approaches.

There are several basic assumptions to the procedure and design employed. One assumption is that to obtain the most meaningful information it is necessary to go directly to the person performing the job or activity and ask for the information from them. In other words the person actually working in the job is the best source of reliable information describing their own activities and situation.

A second assumption is that validity and reliability are directly dependent upon the full understanding of the respondent as to just what kind of information is desired and an assurance that the respondent understands the type or classification of information that may be utilized in the study. Under this assumption then, the personal interview approach can provide this type of information. If the respondent is not clear on the exact type of information desired, the question can be pursued and the answer properly classified on the spot to prevent any misinterpretation of either the question or the response when coding is accomplished once the interviewer returns to his office or the questionnaire is received in the office. The fact that the study was an independent unit and not associated with a state or school authority helped to increase rapport and objectivity on the part of the people interviewed. In addition, the interviewers were not threatening to the people interviewed because they represented a variety of occupational areas in addition to nursing.

There are three basic phases to the research project, each running approximately one year in length. The first phase is concerned with employed practical nurses. It is a study of the knowledges, functions, and occupational patterns of a structured random sample of employed practical nurses. The second phase is a study of characteristics of a selected sample of programs and students of practical nursing. The third phase is a follow-up study of the applicants, drop-outs, and graduates after the graduates have been out of school for at least four months. A proposed fourth phase for future consideration is a four-year follow-up study of the graduates and programs that were included in the sample of programs of practical nursing.

Phase I

The possible discrepancy between what is taught in the curriculum and the practice on the job is pointed out in several studies. In Minnesota, Hansen and Stecklein's study found that over half of the practicing practical nurses were performing some functions that were not taught in all educational programs. Van Trump, in his study of general hospitals in Missouri, noted that there are significant differences between the reports of practical nurses themselves and the professional nurse supervisors relative to the duties performed by the practical nurse with patients of varying degrees of illness. This situation would be contrary to the more commonly accepted statements of the role of the practical nurse.

In order to identify the knowledges, functions, and occupational patterns of a selected sample of employed practical nurses who are licensed on a basis of having attended an approved education program, it was necessary to determine the places that practical nurses work. A search of the official licensure records in Illinois and Iowa was made in order to ascertain the current licensure status of every tenth practical nurse, that is, whether currently active or inactive; and to also determine whether the person was living in the state or out of state and by what method licensure was granted--education, waiver, reciprocity, etc.

From the total ten percent who had ever received a license for practical nursing in the state of Illionois or Iowa, we identified those who met the following criteria: (1) maintaining active licensure, (2) had a resident address in the respective state, (3) who had been licensed following an approved educational program. These people were interviewed by telephone or contracted by a mail questionnaire in order to determine if they were gainfully employed, if their employment was in nursing, full or part time, and, if employed, the names and locations of their employers. There was over a 97 percent return from the telephone and mail survey of over 900 LPN's. From this survey, a random sample of 100 employment locations was selected. These locations were selected to be representative of the various types of employment situations and assignments of practical nurses.

Data recorded on the licensure records of each of the respective states, in themselves, gave a great deal of descriptive information regarding licensed practical nurses. Although much of this information was not directly required or necessary for the Practical Nursing Study, it was felt that the opportunity to collect it could not be ignored. This type of information does add to the relatively meager base of information now in existence. The staff in each state has requested and has received funds in order to further analyze the type of information that was available from the registration records.

For each of the one hundred employment locations, seventy in Illinois and thirty in Iowa, an employment location interview sheet was developed. Part of this material was coordinated with that of the Hospital Association so that comparisons could be made on the relative size and type of institutions as well as the number of personnel employed and vacancies in the various nursing personnel categories. Salary and type of educational training affiliations were also included as background information for each employment location.

The selection and number of LPN's to be interviewed at any one employment locations was related to the number of LPN's employed there. (A sliding scale was used.) An attempt was made to obtain a random sample of the LPN's so that the interviewees were representative as to shift, type or area of service within the employment location, and educational background.

Development of the interview format:

Throughout the development of all data collection instruments, particular note was made of previous and currently used research formats and procedures. Where applicable, these established or tested models were used. This utilization of existing techniques and procedures was deliberately designed to allow comparison of the findings of this Study with others. In other words, a conscious attempt was made to supplement the existing knowledge about practical nursing by using established procedures in previously unexplored areas of practical nursing in an attempt to broaden the primary base. In no way does this study explore all the possible variables or facets which could be a casual link to an LPN being successfully recruited, educated and functioning as a member of the health service team.

The employed LPN interview can be divided into three parts; a personal interview for background information, a responsibility sort, and the Q or forced sort.

Personal Interview

A collection of possible relevant factors or functions was drawn up by the project staff. A list of desired or "ought to have" information was derived in this manner. The process of selection was based on several criteria such as: actual relevance as compared to hoped for causative factors; those factors that would be the most productive; and, in many cases, the feasibility of collecting the desired information within the time, money, and research techniques available. Although the last criteria may seem rather mundane, it was a most important consideration to be reckoned with; therefore, the final list of questions were statements of "ought to have" information that offered the greatest reliability and facility of collection under the actual interview conditions.

Once the questions were formulated, a method of recording the interviewees' responses had to be developed. Part of the value of the personal interview is the situation itself which allows the interviewer to pursue a specific and actual response. Nuances in classification could also be pursued and defined in this manner.

To facilitate both the collection of data and the processing of data, the types of responses were coded prior to the interviews, therefore allowing the responses to be coded on the spot. This procedure also facilitated the next step, analysis, with a reduced error rate.

The coding formats contained all possible or applicable responses that could be foreseen by the project staff. The codes fell into certain categories according to their use, such as geographic code, practical nursing school code, employment level and health area code, reasons for doing something code, work/school involvement code, size of town, marital status and even "yes" and "no." Thus, whenever the reason for doing something was given, the "reason for" code format was used. Let us say that we asked an LPN the reason for taking a job at a specific hospital. If her response was "Well, I trained here," then an "88" (clinical experience at the institution) was recorded on the coding format. Should she be working in the operating room, as a scrub nurse, a "28" would be placed in the level area space. This final format was arrived at only after many trials and pilot studies. The first interview in the pilot study took about an hour and fifteen minutes; this was obviously too much time considering the time required for the other parts in this phase. After each trial or set of trials, the staff evaluated the format and made changes in the form of revision or exclusion. The interview for the LPN regarding family background, PN and general education, occupational history and current job presently takes 10 to 20 minutes depending upon the number of occupational changes of the LPN.

As can be seen from the above, the use of individual interviewers and prior coding format carries with it a far greater obligation for pilot tests and try-out with the coding format, interview technique, and training sessions for all interview personnel concerned to assure a high degree of inner-interviewer reliability.

After the background interview, the interviewee is given a group of 99 cards that list possible functions or duties of an LPN. She is asked to sort all the cards on the basis of her present duties (her shift is also noted). This sort is an attempt to determine what are the duties of the LPN; an attempt is made at the same time, to determine at what level of responsibility and/or supervision she may perform each duty. This sort takes 10 to 15 minutes dependent upon the reading skill and background of the LPN.

The professional nurse supervisor and nursing aide who work with an LPN are also interviewed and asked to sort the cards on the basis of the duties of the LPN. This team is used approximately with every fifth LPN. Thus, the study is primarily concerned with the LPN's assessment of her present position. The interviews with the LPN's supervisor and aide should provide a basis for comparison of background, knowledge, functions, and role image as seen from each position. Questions such as: Is the perception of the role basically the same or if there are differences, and are they related to any particular area such as recording, specific treatments, observations, may be clarified in this manner.

Selection of the function cards:

Three coordinators of practical nurse programs developed a list of approximately 200 statements that would be representative of the activities a practical nurse might perform. A few statements were included that normally are either below or above the usual expected functions of an LPN. The coordinators, with the project staff, revised the list to 113 functions and preliminary try-our was made. Another project team clarified wording and reduced the list to 99 representative duties. These 99 cards were selected on the basis of the greatest possible inclusion of activities without having the list of functions too long to be unmanageable.

The final list of 99 statements was reviewed by several different people in practical nurse education as well as the project director, co-director, and associate investigator for validity, representativeness and appropriateness. With the exception of one or two cards, the statements seem to be well interpreted and representative to the LPN.

The final section for the employed LPN interviews again is related to the functions listed on each individual card. She is to sort the statements in terms of importance in her work along a continuum of "most important" to "least important."

Q-Sort

Previous research in curriculum content determination has dealt with the problem of functions and duties performed by practical nurses and/or the frequency or performance. This type of antecedent information, among other things, give curricula developers direction as to the range and inclusion of function and duties that they must be aware of a question as to the adequacy of these types of information leads the Practical Nursing Project to also want to explore another variable in the functioning of practical nurses this variable is "importance." By "importance," the project ment the LPN's perception of her role along multi-demensional lines. Questions as to frequency of performance, condition of patient, and amount of knowledge required are key criteria in the determination.

The LPN's were asked to rank the function and duty cards in terms of their perception of the importance of the duties to them in successfully carrying out their role in their current position. The cards were sorted into a quasi-normal distribution. This forcing of responses into a distribution or Q-sorting is based on the theoretical structure developed by Stephenson as an attitude measure. It was extended by Dr. William John Schill and applied to technicians as a curriculum research tool.

The Q-sort completes the interview format of phase I. The total time involved averages an hour for each LPN and 1/2 hour for each RN and aide. The majority of the employment locations have released the LPN to be interviewed during her work shift. Some of the LPN's on private duty have been interviewed in their homes.

Using phase I as an antecedent base, phase II planning began in January of this year. During phase II all applicants and enrolled students for 45 of the 48 practical nurse programs in Illinois and Iowa for the September 1966 through February 1967 class will be tested, interviewed and followed during their year of education. Instructors in schools of practical nursing will also be asked to sort the function cards on the basis of curriculum emphasis. The question that is apparent here is, "Are the duties and emphasis the same from a curriculum standpoint as the actual activities in practice?"

A criterion for the tests selected was its use by LPN programs and other studies. The NLN has developed three tests for practical nursing programs. These will be administered to the students at the appropriate time intervals. The Dailey Vocational Guidance tests will also be administered to the students. Applicant information will be coordinated with data from the Speciality Oriented Student Research Project. The SOS Study is headed by Dr. Kenneth Hoyt, University of Iowa, and concerns itself with the occupational patterns and choices of the non-college directed individual.

Utilizing some of the NLN school criteria for practical nursing programs, the study will attempt a descriptive look at the various types of programs. Some of the areas of investigation will be a search for basic cores of all practices and individual differences.

Previous studies have indicated there may be a group of high ability students as well as low ability students who do not complete the educational program. By following the applicants and students who either drop out or graduate, an attempt will be made to isolate characteristics of the dropout groups and the "successful" groups.

Thus, phase III will involve the follow-up of a random sample of all the individuals in phase II. Again, the research technique of the personal interview as well as mail questionnaires will be used. Answers to why do students drop out what are the occupational patterns of the new graduate, and are these patterns similar to employed practical nurses in total as determined in phase I will be attempted, if only in part. We hope phase II and phase III with their antecedent, phase I, will result in identification of discriminating selection criteria which tend to predict success in practical nurse programs and employment. The two-state sub-studies will provide a comprehensive base of all LPN's in the two states for comparative purposes.

The proposed four-year follow-up phase IV, would utilize instruments and findings of the previous three phases. Do the relationships and characteristics of the new graduate change over a time period?

At this point we will seem to be asking more questions than we are answering. By fall, the first report of the findings of registration licensure information for each state will be completed. At the present time, the data is being analyzed by computer services. It is hoped that preliminary findings will be available for distribution shortly.

There are innumerable components involved in conducting any research study. In a study of this complexity, the potential problems multiply at least as fast as the potential benefits. Adequately trained personnel with a genuine interest and enthusiasm is probably the greatest single element, but they must be backed up by the supporting attitude of the sponsoring institution and their facilities such as computers and support equipment, consultants and resource personnel, library and, in this study, a fleet of airplanes has proven to be a real advantage.

Another key to success is the cooperation, interest, and support of all personnel, agencies, advisory groups, and individuals representing the schools, hospitals, nursing homes, agencies, and LPN's. Their high degree of interest and outstanding cooperation will go a long way in assuring whatever success we may have. No report of this study would be adequate without recognizing these people and expressing our genuine appreciation.

ONE APPROACH TO RESEARCH IN HEALTH OCCUPATIONS EDUCATION
An Overhead Projection Presentation

by

Forbes W. Polliard

A. THE INDIANAPOLIS INDIANA METROPOLITAN AREA

- Is generally considered to encompass the seven counties adjacent to Marion County, in which the city of Indianapolis is located
- Has a population of approximately 1,000,000 persons
- Has a high socio-economic level and had in 1962 an average family income 5% above that of the national average
- Is the home of Indiana University's School of Medicine which is one of the larger medical schools in the nation and the only medical school in the state
- Serves as the center of medical services for the state
- Is the home of a number of public and private universities and colleges

B. INDIANAPOLIS HOSPITAL DEVELOPMENT ASSOCIATION

1. A non-profit organization composed of community leaders from:
    - Business
    - Industry
    - Education
    - Health Professions

2. The Association is supported by:
   - Present IHDA $15.5 million united hospital campaign-5 hospitals at 13 million now
   - Hospitals and other health agencies sharing costs of special studies
   - United States Public Health Service Area-wide Planning Grant
   - United States Office of Education, Bureau of Research, Division of Adult and Vocational Research Grant.
3. Program Planning
   - Extensive committee involvement has been used in projects.
   - Consultants have allowed rapid build up of facts and expedited the decision process.
4. Our primary objective
   - Is to analyze, interpret and facilitate the development and/or improvement of health services
5. Several approaches to the development and/or improvement of health services have been used
   - Identify, document, and determine the appropriate resources for implementation
   - Assist in the initial implementation-then separate cooperative-as laundry
   - Assist in the coordination of existing resources
   - Increase the awareness of the general public to health resource needs and opportunities
   - Coordinate efforts of the public in the support of health services
6. Past and present major activities
   - 1950 Community Planning Study
   - 1953 $12 Million United Hospital Campaign
   - 1959 Community Planning Study
   - 1962 Hospital Facility Needs Study

- 1963 Centralized Laundry Study
- 1965 Nursing Resources in the Metropolitan Area Survey
- 1965 Centralized Computer Planning Study
- 1965-66 $15.5 Million United Hospital Campaign
- 1966 Manpower Requirements and Education and Training Programs of Selected Health Occupations Survey

C. SURVEY OF NURSING RESOURCES IN INDIANAPOLIS METROPOLITAN AREA

1. Reasons for the study of nursing resources
    - Planned 40% increase in hospital beds.
    - A need for adequate numbers of personnel possessing the necessary skills to staff future beds and services
2. How the study was conducted
    - A special steering committee was appointed to work with consultants. Committee members represented:
        - Local medical association
        - State and local nursing associations
        - Schools of nursing
        - Hospital administrators
        - Civic leaders
    - Interviews were held in the indianapolis metropolitan area with:
        - Directors of schools of nursing and college and university administrators
        - Hospital administrators and directors of nursing, leaders of nursing, medical, and hospital a associations
        - Directors of government and community agencies concerned with nursing.

- Interviews were held with national nursing leaders.
- Various national and local surveys and studies relating to nursing experiences, trends, costs, and goals were reviewed and findings utilized when applicable.

Questionnaires were completed by:

- Hospitals, nursing homes and other selected employers of nurses
- High school seniors in the eight-county metropolitan area
- Graduates of Indianapolis-area nursing schools from 1935 to 1964

- A cost study of nursing education programs was conducted.
- Follow-up meetings were held with the directors of present and potential nursing education programs to discuss the findings and recommendations of this report.
- A plan of action was developed and a Staffing of Health Care Facilities Committee was appointed to assist in implementation.

3. Scope of the study

- Characteristics of 2,256 of the 2,378 nurses employed in area hospitals, schools of nursing, public health agencies, and selected nursing homes.
- Characteristics of the 7 existing metropolitan area schools of nursing
- Characteristics of students admitted to area schools of nursing from 1955 to 1961.
- Characteristics of 3,289 of the 7,820 graduates of all schools of nursing in the area from 1935 to 1964.
- Future career plans of 9,656 of the 12,552 1964 high school seniors in metropolitan area public, parochial and independent schools, especially the 1,815 students interested in health careers and the 557 who indicated plans to enroll in nursing programs.
- Costs of nursing education in the 7 metropolitan area schools of nursing.

D. SOME OF THE SIGNIFICANT AND INTERESTING FINDINGS OF THE STUDY OF NURSING RESOURCES IN THE INDIANAPOLIS METROPOLITAN AREA

1. Profile of nurses currently employed by hospitals, schools of nursing, public health agencies, and nursing homes by basic nursing education programs

Baccalaureate Degree

- 51% were graduated from Indiana University School of Nursing; 26% from out-of-state school.
- 2% have earned master's degrees; nonehholds a doctor's degree.
- 50% have been in their present employment less than two years; 70% less than six years.
- 30% were students immediately prior to their present employment; 45% were employed as nurses.
- 50% are married; 40% are single
- All are women
- 72% are under 30 years of age; 10% are over 50 years of age.

Associate Degree

- Nearly 90% were graduated from Indiana Central College.
- 11% have earned bachelor's degrees; none has earned a graduate degree.
- 85% have been employed by their present employers less than two years; 100% less than six years.
- 80% were students immediately prior to their present employment; 10% were employed as nurses
- 42% are married; 55% are single
- All are women.
- 90% are under 30 years of age; none is over 50 years of age

Diploma

- 50% were graduated from area diploma schools; 26% from out-of-state schools.
- 23% have earned collegiate degrees; the highest educational attainment of 17% is the baccalaureate degree; 5%, masters's degrees; and 0.7%, doctor's degree.
- 28% have been in their present employment less than two years; 61%, less than six years.
- 14% were students immediately prior to their present employment; 55% were employed as nurses.
- 62% are married; 25% are single.
- 5 or the 1,197 nurses are male.
- 27% are under 30 years of age; 21% are over 50 years of age.

Licensed Practical Nurses

- 75% were educated at the School of Practical Nursing in Indianapolis.
- Less than 3% have earned baccalaureate degrees; none has an earned graduate degree.
- 37% have been in their present employment less than two years; nearly 70% less than six years.
- 50% were students immediately prior to their present employment; one-third were employed as nurses.
- 68% are married; 27% are single.
- Two of the 542 are male.
- 27% are under 30 years of age; 30% are over 50 years of age.

2. Characteristics of high school girls in Indianapolis metropolitan area planning to enroll in nursing schools (See chart, p. 136)
3. Indianapolis-area high school seniors who planned or are considering a nursing career and reasons for lack of interest of those no longer planning such a career. (See chart, p. 137)

436 - No longer planning on a nursing career

233 - too much schooling
134 - no interest in the field
10 - poor grades
6 - work experience unsatisfactory
4 - poor pay or working conditions
3 - lack of security
2 - cost of education
44 - not recorded or other reasons

557 - Planning on nursing

105 - uncertain
452 - certain

10 - High school seniors

4. Total income and expense per student to complete nursing education programs in the Indianapolis metropolitan area. (See chart, p.138)

5. Student enrollment and capacity of nursing schools in Indianapolis, 1960 to present, and projections of schools to 1975, according to their present plans. (See chart, p. 139)

6. Hospitals' projections of needs for full-time equivalent nurses, by educational qualification, according to current plans for hospital expansion. (See chart, p. 140)

7. Summary of the plan for the development of nursing resources in the Indianapolis metropolitan area to meet goals by 1975. (See chart, p. 141)

E. PROGRESS TO DATE

- Methodist Hospital has phased out its diploma program and has affiliated with the Indiana University School of Nursing in an associate degree program.

- Purdue University has developed an associate degree program with three Indianapolis hospitals.

- St. Vincent's Hospital plans to phase its diploma into a baccalaureate degree program.

- Indiana Central College is expanding its associate degree program.

- General Hospital is continuing to strengthen its diploma program.

- Indiana University is expanding its baccalaureate and graduate degree programs.

F. OUTGROWTH OF THE STUDY OF NURSING RESOURCES

1. The nursing study concentrated on the availability and supply of nurses as well as the cost of nursing education. Continuing efforts of the IHDA are focused on:

    - Availability of and need for other allied health personnel.

    - Utilization of present health personnel.

    - New approaches to organizing, utilizing and educating health personnel.

G. THE ASSOCIATION HAS INITIATED A PRELIMINARY STUDY OF HEALTH MANPOWER RESOURCES.

1. This study will include consideration of the following:

    - Functions and services performed by health personnel.

    - Utilization of health personnel.

    - Changing functional requirements of the health system.

    - Education and training required to perform functions and services.

    - Costs of training and educating health personnel.

    - Common cores of knowledge required of health personnel.

    - Education and training programs.

    - Impact of the computer on health services and functions.

2. To conduct the present Preliminary Study of Health Manpower Resources, the IHDA staff and consultants will work incooperation with:

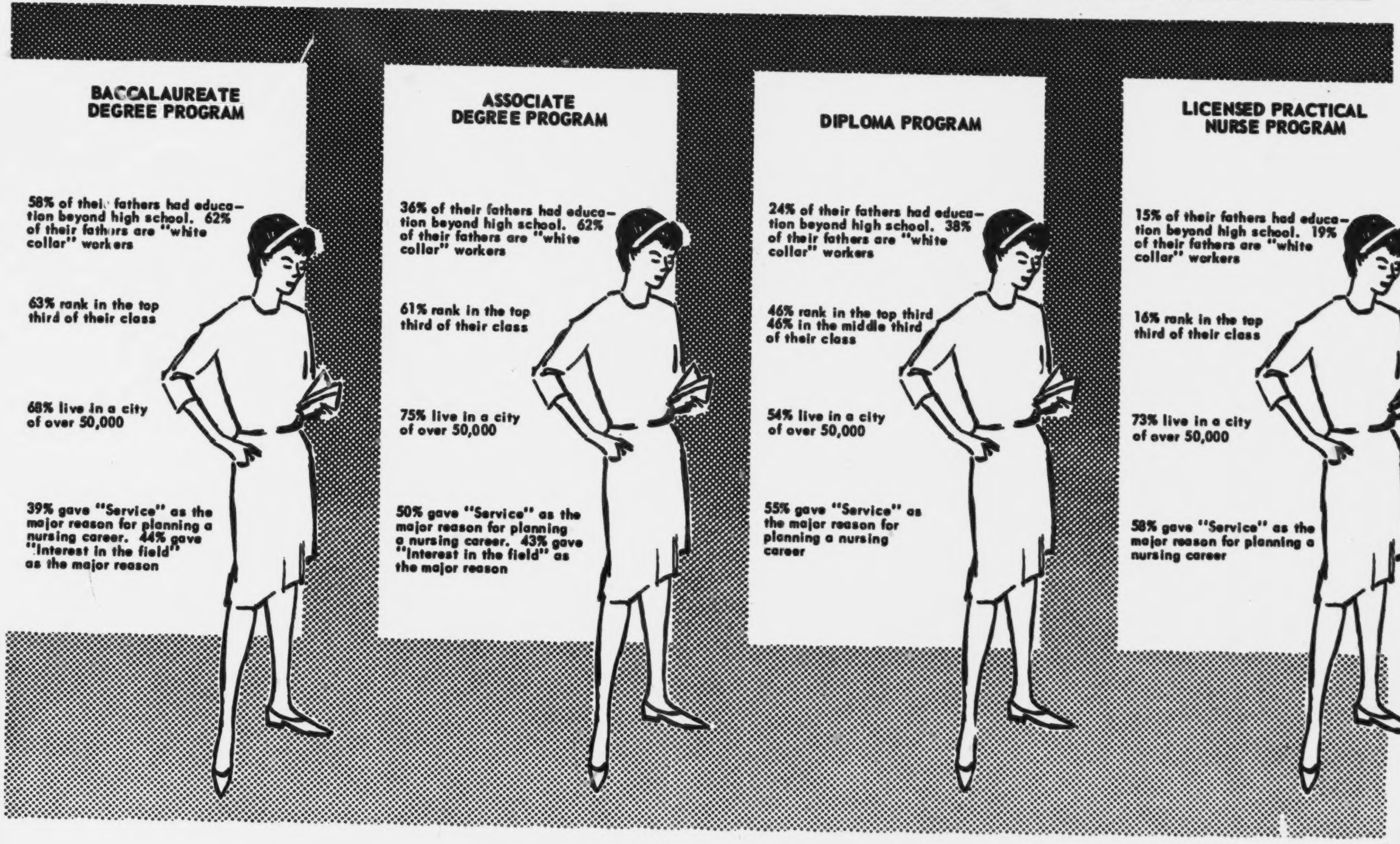
    - IHDA Medical Advisory Committee.

- IHDA Executive Health Advisory Committee.
- IHDA Staffing of Health Care Facilities Committee.
- Selected educators, deans and chief administrators of health personnel education and training programs.
- Officials of local, state and national organizations of health professions.
- Employers of health personnel.
- Health profession practitioners.
- Representatives from the U. S. Office of Education and the U. S. Public Health Service.

EXHIBIT XIV

NURSING RESOURCES IN THE INDIANAPOLIS METROPOLITAN AREA

CHARACTERISTICS OF HIGH SCHOOL GIRLS IN INDIANAPOLIS METROPOLITAN AREA PLANNING TO ENROLL IN NURSING SCHOOLS



BACCALAUREATE DEGREE PROGRAM

58% of their fathers had education beyond high school. 62% of their fathers are "white collar" workers

63% rank in the top third of their class

68% live in a city of over 50,000

39% gave "Service" as the major reason for planning a nursing career. 44% gave "Interest in the field" as the major reason

ASSOCIATE DEGREE PROGRAM

36% of their fathers had education beyond high school. 62% of their fathers are "white collar" workers

61% rank in the top third of their class

75% live in a city of over 50,000

50% gave "Service" as the major reason for planning a nursing career. 43% gave "Interest in the field" as the major reason

DIPLOMA PROGRAM

24% of their fathers had education beyond high school. 38% of their fathers are "white collar" workers

46% rank in the top third
46% in the middle third of their class

54% live in a city of over 50,000

55% gave "Service" as the major reason for planning a nursing career

LICENSED PRACTICAL NURSE PROGRAM

15% of their fathers had education beyond high school. 19% of their fathers are "white collar" workers

16% rank in the top third of their class

73% live in a city of over 50,000

58% gave "Service" as the major reason for planning a nursing career

EXHIBIT LIII

NURSING RESOURCES IN THE INDIANAPOLIS METROPOLITAN AREA

INDIANAPOLIS-AREA HIGH SCHOOL SENIORS WHO PLANNED OR ARE CONSIDERING A NURSING CAREER AND REASONS FOR LACK OF INTEREST OF THOSE NO LONGER PLANNING SUCH A CAREER

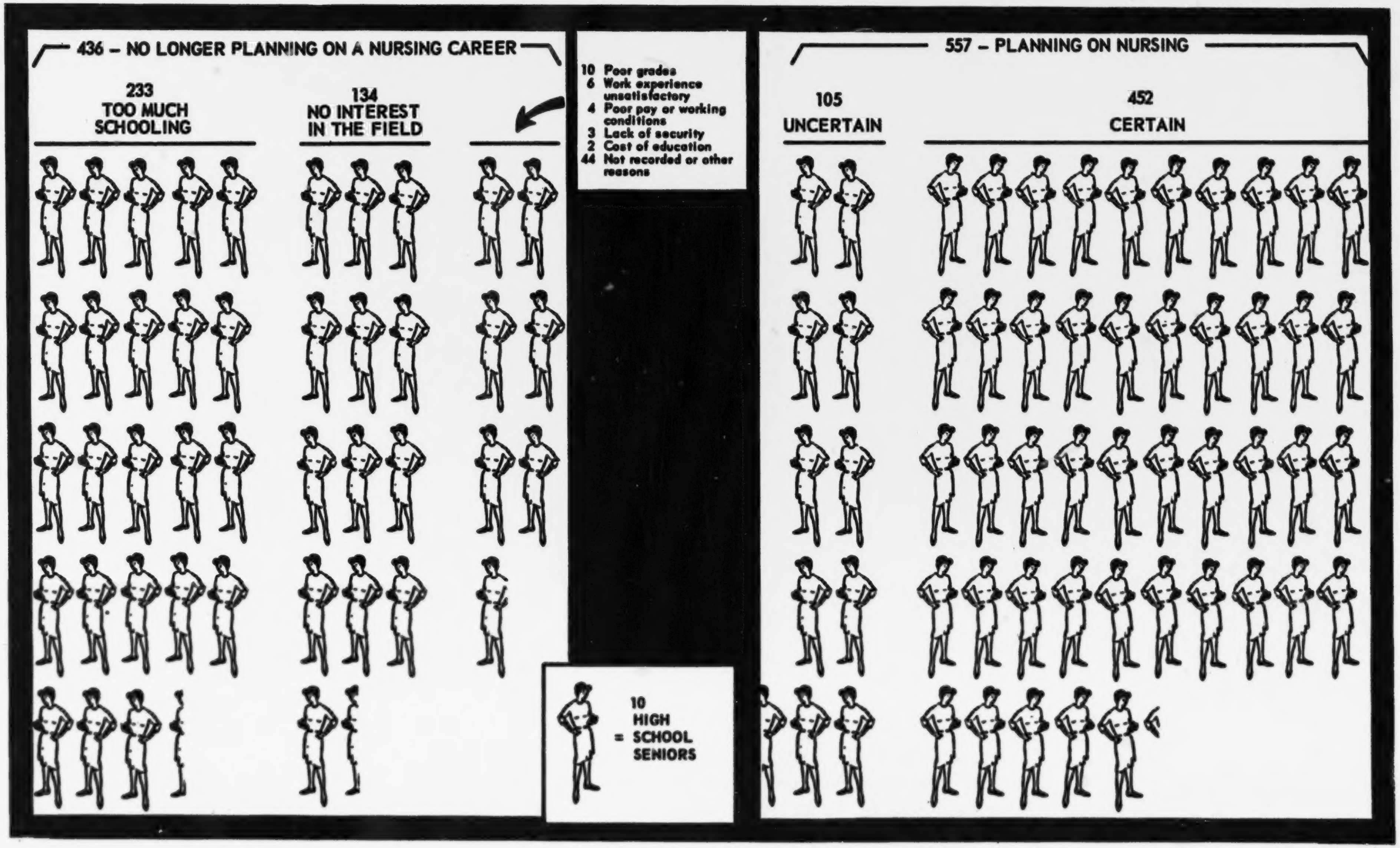
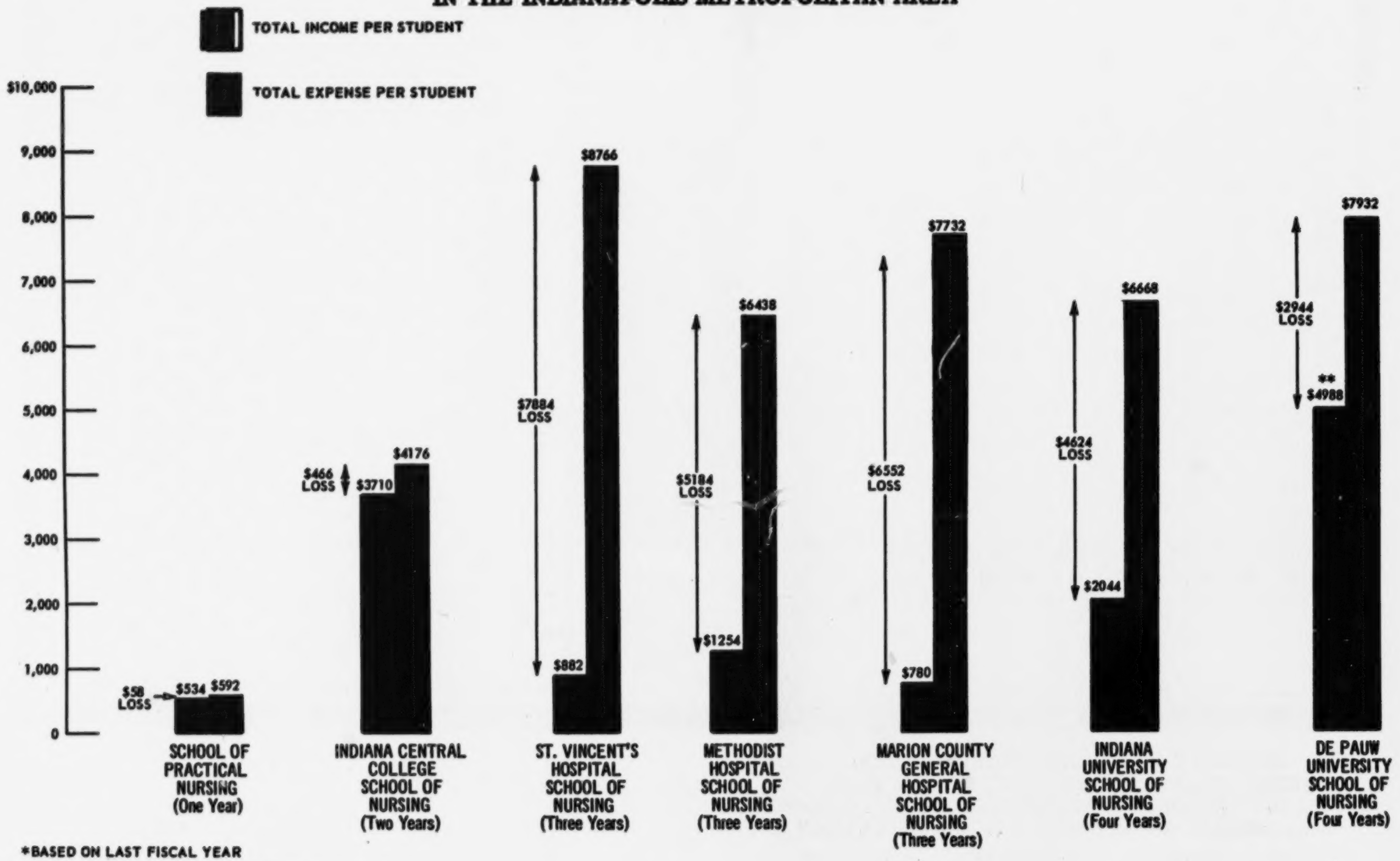


EXHIBIT XIX

NURSING RESOURCES IN THE INDIANAPOLIS METROPOLITAN AREA

TOTAL INCOME AND EXPENSE PER STUDENT* TO COMPLETE NURSING EDUCATION PROGRAMS IN THE INDIANAPOLIS METROPOLITAN AREA



*BASED ON LAST FISCAL YEAR

**DOES NOT INCLUDE FIRST OR SECOND YEAR HOUSING

EXHIBIT XLI

NURSING RESOURCES IN THE INDIANAPOLIS METROPOLITAN AREA

STUDENT ENROLLMENT AND CAPACITY OF NURSING SCHOOLS IN INDIANAPOLIS, 1960 TO PRESENT, AND PROJECTIONS OF SCHOOLS TO 1975, ACCORDING TO THEIR PRESENT PLANS

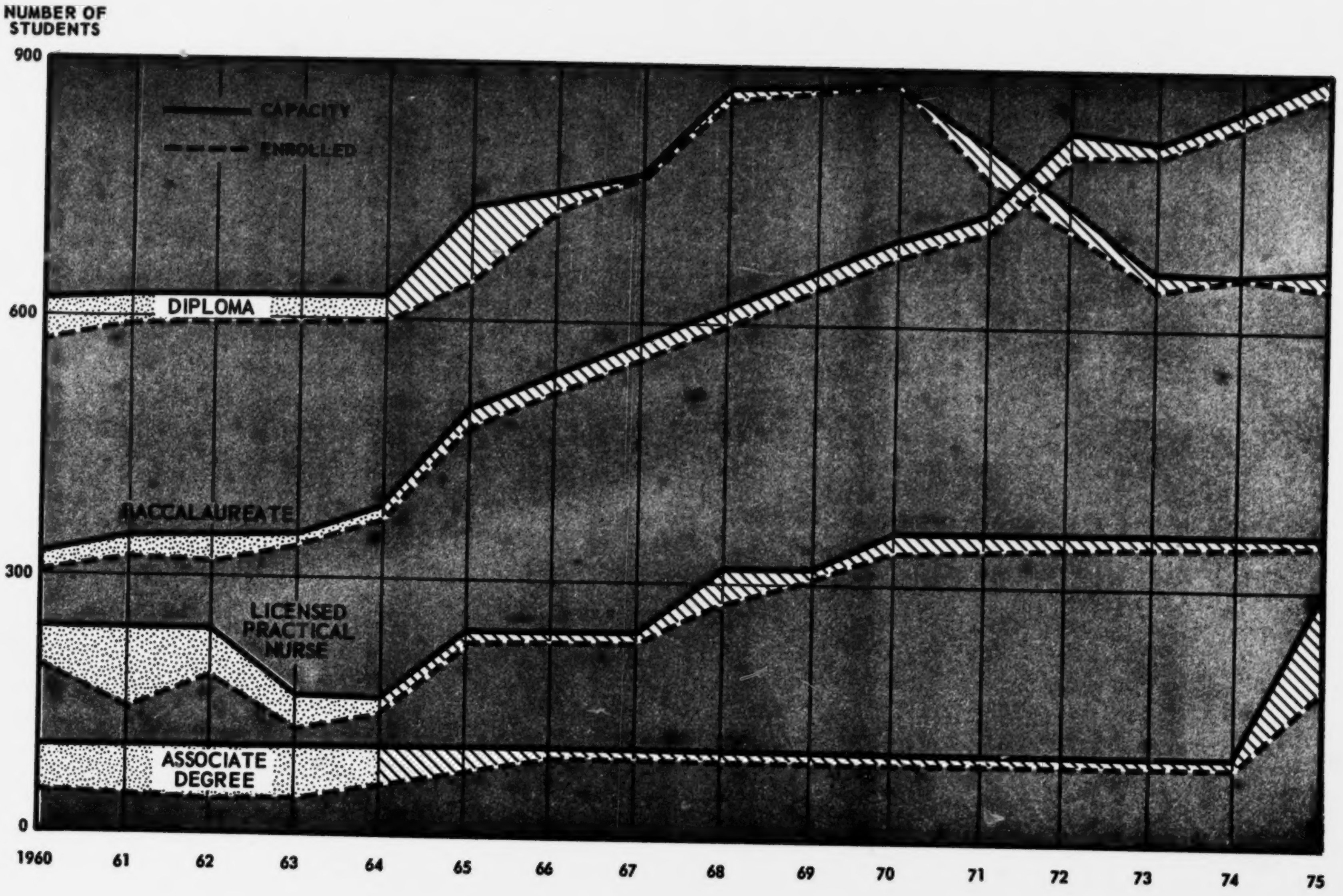
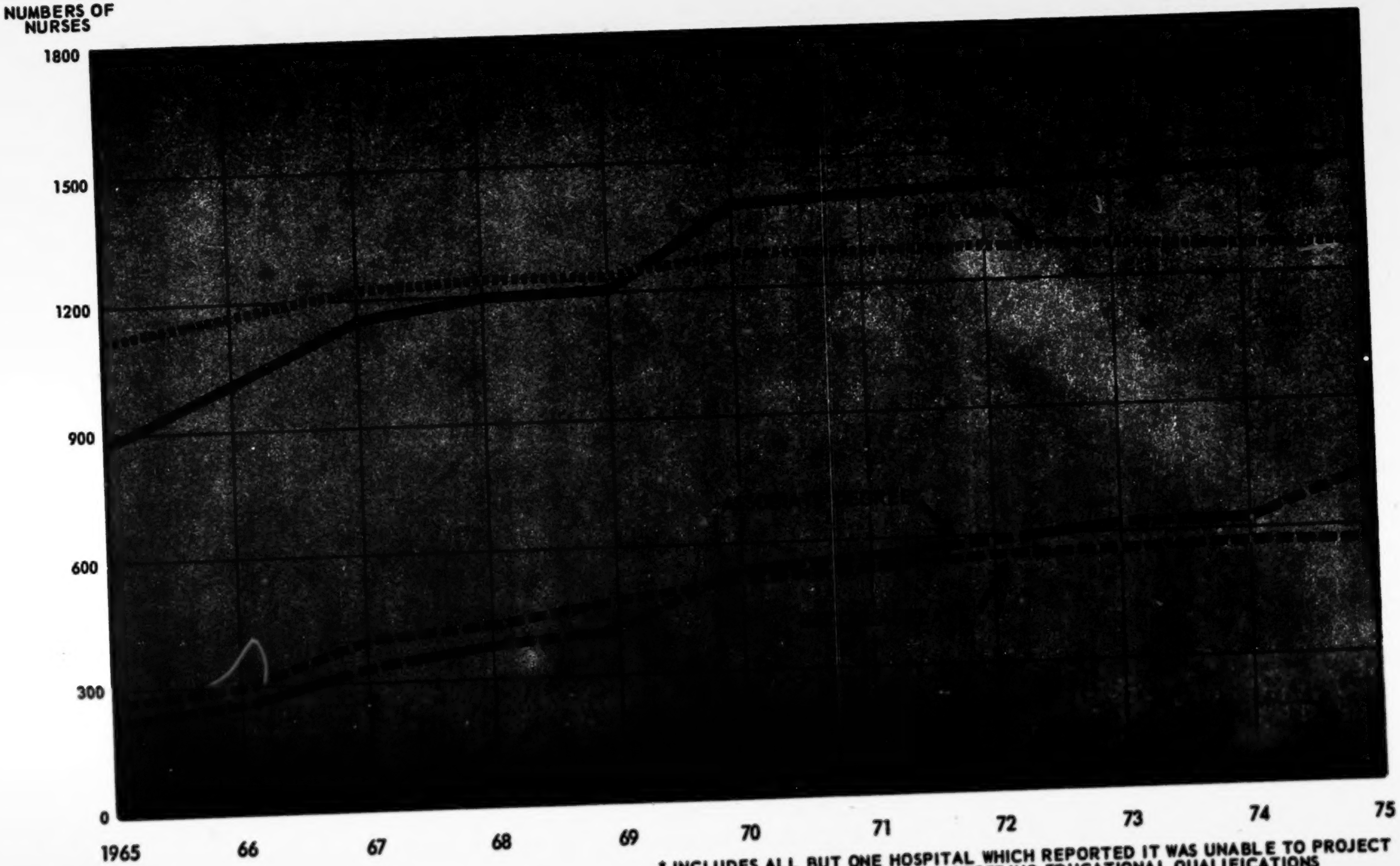


EXHIBIT XXXIX
NURSING RESOURCES IN THE INDIANAPOLIS METROPOLITAN AREA

HOSPITALS'* PROJECTIONS OF NEEDS FOR FULL-TIME EQUIVALENT NURSES, BY EDUCATIONAL QUALIFICATION, ACCORDING TO CURRENT PLANS FOR HOSPITAL EXPANSION

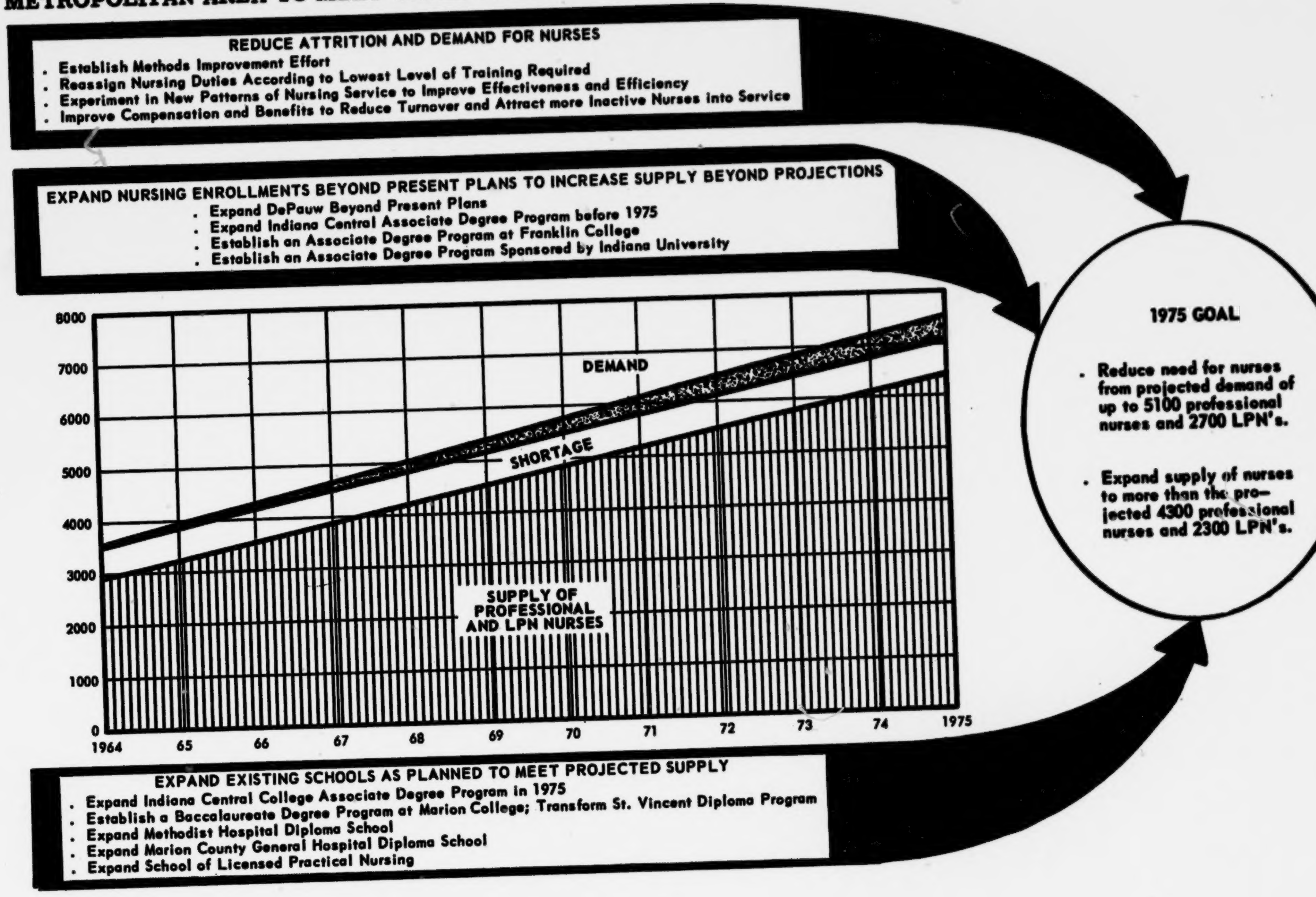


* INCLUDES ALL BUT ONE HOSPITAL WHICH REPORTED IT WAS UNABLE TO PROJECT ITS FUTURE STAFFING NEEDS ACCORDING EDUCATIONAL QUALIFICATIONS

EXHIBIT LII

NURSING RESOURCES IN THE INDIANAPOLIS METROPOLITAN AREA

SUMMARY OF THE PLAN FOR THE DEVELOPMENT OF NURSING RESOURCES IN THE INDIANAPOLIS METROPOLITAN AREA TO MEET GOALS BY 1975



REDUCE ATTRITION AND DEMAND FOR NURSES

- Establish Methods Improvement Effort
- Reassign Nursing Duties According to Lowest Level of Training Required
- Experiment in New Patterns of Nursing Service to Improve Effectiveness and Efficiency
- Improve Compensation and Benefits to Reduce Turnover and Attract more Inactive Nurses into Service

EXPAND NURSING ENROLLMENTS BEYOND PRESENT PLANS TO INCREASE SUPPLY BEYOND PROJECTIONS

- Expand DePauw Beyond Present Plans
- Expand Indiana Central Associate Degree Program before 1975
- Establish an Associate Degree Program at Franklin College
- Establish an Associate Degree Program Sponsored by Indiana University

EXPAND EXISTING SCHOOLS AS PLANNED TO MEET PROJECTED SUPPLY

- Expand Indiana Central College Associate Degree Program in 1975
- Establish a Baccalaureate Degree Program at Marion College; Transform St. Vincent Diploma Program
- Expand Methodist Hospital Diploma School
- Expand Marion County General Hospital Diploma School
- Expand School of Licensed Practical Nursing

1975 GOAL

- Reduce need for nurses from projected demand of up to 5100 professional nurses and 2700 LPN's.
- Expand supply of nurses to more than the projected 4300 professional nurses and 2300 LPN's.

REPORT TO GROUPS - SUMMARY OF MAJOR FINDINGS AND RECOMMENDATIONS

REPORT TO GROUPS - SUMMARY OF MAJOR FINDINGS AND RECOMMENDATIONS

by

Orieanna C. Syphax

WHAT:

A health occupations center is the organizational structure and comprehensive plan for accomplishing the educational objectives developed for and hopefully with people in a given geographic area or community. The concept is more important than the building. However, a separate building would have the following advantages: (1) promotes more rapid development of core curricula, (2) promotes the joint use of basic educational services, physical facilities and supporting services; facilitites coordinated planning; and provides a stimulating environment for faculty and students.

The center should encompass all types of health occupations programs--for people at all levels--in all types of institutions (public and private). It will include vocational education for those who have not reached or completed high school, vocational education at the secondary level, or post-secondary, baccalaureate, masters and doctoral levels.

The center will provide all types of services such as a comprehensive guidance program (testing service--counseling--placement--occupational information), teacher education, instructional or educational materials development (curricula-audio-visual materials) library services, surveys, research, and evaluation.

It is important to emphasize that the center would not replace any present programs nor prevent the development of new training programs in a variety of institutions. Rather, it would influence the direction or types of programs to be developed and coordinated educational planning with the goal in mind of providing a balanced or comprehensive program of health occupations education.

The center must be flexible. Centers need not follow the exact same pattern in all areas of the country.

Avoid staking out a level of education--avoid associating exclusively with one type of institution. Unless the center rises above a level of education or one type of institution it will never materialize.

FOR WHOM:

The center will serve to develop human resources to the maximum. The health occupations education center will serve people of all ages. For example, the lower grades might be served by occupational information.

Individuals with special needs will be served including those whose education has been interrupted; the physically, socially, mentally, financially, and otherwise handicapped or disadvantaged persons; as well as the average, above average, the gifted and talented.

HOW:

The center functions by coordinating educational services and programs and, if necessary, by providing training to fill the voids or gaps.

It coordinates the activities of boards of regents, statutory and regulatory boards, and accrediting agencies. Through this activity it will help to achieve open-endedness and vertical mobility.

Its systems approach includes computer programming which will show on any given day the number of students enrolled, where and in what types of programs, and how many persons were served on any given day.

Its closed circuit educational TV system will permit tuning in on a variety of occupational classes in educational institutions or demonstrations and clinics in health service agencies.

The center should be served by an advisory committee or committees representing the consumer, the employer, the graduates and experts from the various fields.

The center will utilize work-study and cooperative training programs or methods and will encourage the formation of youth groups as a media for leadership development.

The center serves outlying schools and satellite agencies perhaps with staff and through a variety of communications media including educational TV facilities.

The question who shall administer the center was not clear, but the following ideas were proposed:

- A new organization

- Non-profit organization
- A school board
- University
- An integral part of a state and local education system
- Interested citizenry supported by paid staff

A suggestion was made that the governor of the state should be the coordinator. There are no pat answers to the question of administration except to suggest that the center should be administered by the group that will do the job most objectively and effectively.

Somehow the center must work with the employers to imporve wages, personnel policies, and the work climate or environment in the different health agencies.

The center plan will promote maximum and efficient utilization of all health facilities in a community or georgraphic area.

The center should emphasize strengthening, improving, and extending what we have that is needed and that is good. Institutions included in the center which provide different levels of education will serve specific purposes. For example, baccalaureate degree granting institutions will prepare clinicians and expert practitioners; higher degree granting institutions will prepare teachers and vocational guidance counselors.

Through its activities, the center will stimulate the review of state certification procedures, and the establishment of crash programs and long-range teacher preparation programs.

WHERE:

For maximum effectiveness and efficiency the center should be located in an urban area.

Students in health occupations educational programs should have ready access to health agencies included in the center's plan.

WHEN:

The center must operate 12 months a year, perhaps 6 or 7 days a week, and be available to people before and after the average workday. This might mean that certain guidance and other educational services would be available from 8:00 a.m. to 10:00 or 11:00 p.m.

The center concept certainly means something above and beyond the traditional school operation of 6 to 8 hours a day.

WHY:

The concept of a health occupations center should be developed in order to:

- halt the wastage of human resources by promoting education in an area of great need
- increase the public's knowledge and information about a variety of training and employment opportunities in the health field
- pool professional talent and provide a stimulating climate
- economize on facilities - staff
- avoid unnecessary duplication of effort
- develop team concept in health field by welding together professional and non-professional interests.

RECOMMENDATIONS:

- Coordinate effort at all levels--local, state and federal--and more effectively implement methods of communication. The pleas for coordination and communication were unanimous.
- Develop guidelines for the organization and administration of health occupations education centers.
- Disseminate research information about health occupations education effectively.
- Prepare and distribute a newsletter which will cover the latest developments in health occupations education.
- Hold follow-up biennial seminars and meetings.
- Conduct regional seminars in biennium between national meetings.

AGENDA FOR ACTION

AGENDA FOR ACTION

A Summary of Remarks*

by Helen K. Powers

This conference marks signal achievements in the forward progress of education for millions of health workers. The staff of the Ohio State University Center for Research and Leadership Development in Vocational and Technical Education are to be commended for recognizing the need for this seminar, and for providing this opportunity to focus attention on the development of health occupations education centers as one means of expanding and improving the training of health personnel. Especially I would proffer commendation and appreciation to Dr. Robert Taylor, Director of The Center, and Miss Grace Nangle, who served as consultant, Chairman of the Planning Committee, and expediter for the seminar.

There is great urgency in resolving today's shortage of trained health personnel. Education must decide what its responsibility should be and what its potential is for training health services personnel. The public must decide how much and what quality of health service it wants and will support, and thus provide realistic answers on the numbers and kinds of health workers that will be employed to provide those services. Some 2 1/2 million persons are now employed in health occupations providing services in the treatment and prevention of illness. All too few of these millions will be afforded the opportunity to receive any more than a brief introduction to the work he will be expected to perform. Even in occupations that are regulated by laws requiring the worker to be licensed, many will receive minimal training in skills required for the job. Yet, each year, the knowledge explosion in the medical and health fields makes greater demands on these workers. They must read and communicate in a highly technical language, and they must be able to progress in both knowledge and skills just to remain in their present jobs.

Workers for the health field, whose jobs require training at less than the baccalaureate level, currently prepare for entry into the work world through courses and curriculums provided in all types of schools, including comprehensive high schools, vocational schools, technical institutes, community colleges, and 4-year colleges. Such schools using public vocational funds enrolled about 75,000 students in FY

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* Given at Seminar on Health Occupations Education Centers, Edgewater Beach Hotel, Chicago, Illinois

1965. Yet, we are told that 100,000 new workers are needed each year in the health field, and a total of a million new ones by 1975. A task of such proportions will greatly tax present facilities if these continue to operate on the basis of isolated, discreet programs, each one complete for its own purposes. Indeed, unless new and innovative methods of training are sought and introduced into the schools, the goal of a million additional health workers by 1975 cannot possibly be reached.

Dr. William Stewart urged this seminar group at the opening session to do some real soul searching with regard to traditonal curriculums for the training of persons who will staff our health facilities. The "upward assumption" and the "downward transfer" of functions, he noted, creates new work patterns with regrouping of functions and responsibilities. School and faculty will encounter considerable difficulty in meeting the needs of both the trainees and their future employers unless the schools maintain close working relationships with these employers. Both preparatory training and continuing education throughout one's work-life are essential to maintain satisfaction and quality in one's work.

Change must be anticipated and planning should reflect the expectation that change is necessary. As Dr. Grant Venn has stated, "It is not the fact of change but the rapidity of change that must be faced today." It may be shocking to some educators to learn that programs do not necessarily have to fit into one or two academic years or into the semester or quarter system; that the school day need not end and the school close as usual at 4 or 5 p.m.; or that credit hours are essential measurements of education or training. In structuring an agenda for action based on the past three days of discussions during this seminar, I would lean heavily on the experiences and investigations reported by our able speakers and discussion leaders.

As various concepts of a "center" have unfolded here, one over-riding concept was repeatedly stressed. I shall attempt to rephrase and describe that concept. A "center" should be part of the educational system with the training of health workers to be provided in the mainstream of education. A school, or education complex composed of several schools, would serve as the administrative agency for a health occupations training center. All students or trainees would be enrolled in a "parent school" and, at the same time, in occupational training at the "center." Thus, the student at the "center" would continue to have access to all educational services of the school and to extra-curricular activities as well. Moreover, if a student wanted to change his curriculum he could more readily do so. College students change their career objectives four or five times before completing a baccalaureate degree. Students in vocational programs today who want to change curriculums would find it very difficult and nearly impossible in most health occupation curriculums. As a first item in my agenda for action, I would recommend that groups in communities work together with the schools to establish such "centers" for training health workers.

Funds for the expansion of health occupations training were made available by the Congress with funds earmarked for health occupations training under Title II of the George-Barden Act. Additional funds under the Vocational Education Act of 1963 are allocated to the states for use in making vocational training available for all persons, in all communities, who need training in order to become employed. A greater proportion of public vocational funds--federal, state and local--need to be channeled into the training of health workers. Moreover, all resources needed for these programs must be conserved and used with all possible efficiency. The wastage of facilities, teachers, clinical resources, and administrative services could be reduced to a minimum with the centralization of most of this training. Thus, even with present available funds and other resources, greater numbers of trainees could be enrolled in these "centers."

Local and state funds are necessary in the operation of "centers" in order to assure their continuation. The federal government is a junior partner in this important movement. The role of federal programs is to stimulate new developments, gather and disseminate significant information, initiate action to resolve major problems, seek consensus and majority views on program needs and directions, and develop and implement standards for federal participation. While the concept of public support for training health workers may be relatively new to local and state governments, the critical shortages today make it imperative that public funds be sought and used by education agencies in training personnel for hospitals and other health agencies, and for the growing numbers of jobs in community health services.

In an agenda for action on the problems inherent in supplying trained health workers with quality training and education, I would recommend that:

- Preparatory training for health workers be made a part of the community's responsibility and that the education of such workers be placed in the mainstream of education.

- Adequate resources for the support of such training be made available to education agencies through federal, state and local sources of funding.

- State departments of education establish a unit for health occupations at the state level, and employ competent staff in sufficient numbers to give leadership to the development of training in health occupations. State supervision of programs should be provided on an equal basis with supervision for other major fields such as agricultural education and trade and industrial.

- A dynamic program of cooperation and coordination among all elements and "interface groups" be maintained and used to further the training of health workers.

- Elements in the general education curriculum relating to health be studied, strengthened, and made to serve both as pre-vocational learning for health occupations and as useful knowledge for every boy and girl in maintaining his or her own health.

- Explore and develop new approaches to training health workers, such as core curriculums and the use of new media in instruction.

- Initiate teacher education programs, both in-service and pre-service, for those fields in which teacher education presently is not offered and work toward the development of broad based pre-employment teacher education programs for this field. (Efforts are currently being made to explore the needs of teachers in the dental auxiliary field, in the medical technology field, and in the teaching of psychiatric nursing at the practical nurse level.)

- Encourage the development of "centers" for the education of health workers rather than the isolated, single curriculum training programs.

The "center" approach to training health workers is a valid one as has been demonstrated according to reports given during this conference. To summarize many of the strengths inherent in a center, the following are cited:

- The "center" is more effective in producing the kinds and quality of workers needed for the variety of occupations in the health field.
- Instructional equipment and facilities may be shared by several classes enrolled concurrently. The library, laboratories, and teaching models are available to students, whether enrolled for nursing, dental assistant, medical assisting, or similar programs. Faculty teaching in subject fields such as anatomy, bacteriology, or community health and resources may serve all groups enrolled. Better qualified teachers can be employed for these subject fields.
- The "center" provides one location with which health agencies in the community may communicate relative to the training of students, needs for trained workers, and placement of graduates.
- Short-term training courses that are not continuous over the years can readily be organized in such a center and operated on a temporary basis where necessary.
- Applicants have the opportunity to select from a number of occupational objectives and may be more readily counseled into the career best suited to their capabilities. Students may transfer easily if their career objectives change.
- Core curriculum content may be more readily identified and managed more effectively in the "center."
- Trainees with different career objectives in the health field learn to work together, socialize together, and come to understand each other's roles, thus breaking down some of the barriers now existing between groups of health workers in hospitals and community health services.

The health occupations training center provides a vehicle by means of which a community and its health agencies can produce the quality and numbers of health workers needed. The "center" cannot do the job alone but is dependent on the parent school, or schools, for administrative services, on the health agencies for continuing information and advice on program direction, on professionals in the health field for standards of quality, on the community for support, and on its trainees and staff for achievement of community goals. The center provides a means of meeting change and constantly adjusting a program to the community's needs.

To quote Dr. John Gardner, Secretary of Health, Education, and Welfare in an article published in Think in 1962, "In the ever-renewing society, what matters is a system of framework in which growth, renewal and rebirth are facilitated." The growth of the "center" approach to training health workers is surely one effective framework in which communities can better meet today's enormous needs for health personnel.

AGENDA FOR ACTION

by

Grace L. Nangle

In the brief four weeks in which I have had the privilege of serving as a part-time consultant for The Center for Research and Leadership Development in Vocational and Technical Education at The Ohio State University, I have become impressed with the philosophy and purpose of this endeavor.

The theory of the "ripple" effect, which is one of the basic beliefs of the Center, intrigues me. According to this theory, our conference should serve as an effort which will disturb the still waters and cause reflected action or referred pain in successive waves back across to our home states and communities. On a state supervisor's level it would be one of my first thoughts that we in New England should consider a regional effort to bring together a similar meeting of educational and health professionals who can study the report and findings of this national group and begin to develop either state wide or regional plans. I believe we should study New England needs (and you can translate this into your own regional title) and begin to take steps to analyze needs and plan for the future.

The involvement of the community political powers has been urged in many ways here. However, I think we must engage in our own fields with dialogue among ourselves. It is natural and easy to talk with people in our own area of education and discipline. But what needs to take place, I think, is dialogue among all levels interested in education from secondary school to post graduate specialization programs so that the resources of people and money are not wasted and duplicated. This incredibly difficult task must be accomplished by providing means of bringing people together out of concern for common problems. I am certain that if leading educators of all levels in communities do not sit down to talk about how they can best work together to prepare sufficient manpower some other agency or council will be making such decisions for them.

In addition to members of the educational community learning how to communicate with and appreciate each other, the associations concerned with professionals in the health field must encourage communication among groups of their own members. It is only recently that we have begun to see programs in Massachusetts which have included representatives of several types of nursing education programs on the same platform, and this seems an exceedingly healthy start.

My reaction to Dr. Graham's statement that we should recognize our condition as that of a national emergency certainly is a hearty "Amen!" We cannot afford the luxury of talking only to ourselves we must select the key people and convince them. As direct contacts I would agree on the director of the state vocational education, commissioner of education, the president of our Senate and speaker of the House and our governor. I am sure in your own state you will find it easy to identify similar people who must be involved and informed about this and similar conferences, or on whose committees we can serve in order to help put some of the ideas from this national conference and subsequent conferences into action.

For action is the keynote! In priority action, I would place the reorganization of the administration of our ongoing programs to make them more versatile, efficient and coordinated. In planning new centers, I hope we all seriously review the factors which allow for growth which Mr. Mithy described so well, especially the freedom from limits by weight-bearing walls and the need for moveable portable equipment. In my state we have built several beautiful regional schools in the last few years, and to everyone's horror, they are usually not in operation more than three to four years, when they are completely filled and expansion is the order of the day. Large numbers of people are attracted to schools by the excellence and diversity of programs and the attractiveness of the arrangements. We should be ready to serve them. Again, we don't need to be told we face changes, but rather let's look forward to it. Let us ask our advisory committee to help us define the new occupations and skills which must be utilized in years ahead. Let us make it possible, indeed, encourage our professionals, to maintain their know how in their own field. Let us require them to remain active in their professional associations and make it a policy that they be allowed time to attend professional meetings without making--pardon the expression--a federal case of it!

Let us cut out the mode of operation described in Up the Down Staircase and move into an emergency ready to do what we know we can, if we have money, personnel and understanding.

Publishers are eager to prepare manuscripts. We must get some of our knowledge and experience published. There is a critical scarcity of printed materials, as all of you know! I would like to call your attention to the report arising from the Summer Conference on Occupational, Vocational and Technical Education held last summer at Massachusetts Institute of Technology.

In particular on page 21 there are six principles developed by a committee on which I had the pleasure to serve.

1. Preparation for useful, gainful, and satisfying occupation or employment should be one of the objectives of the education of all youth.

2. Certain facts, concepts, skills, attitudes, and processes of vocational-occupational education are relevant to all education and should be experienced by pupils at all educational levels.

3. Education should be conceived in terms of an open-ended sequence of goals, and not as a terminal process.

4. Education for specific vocational competence should provide for built-in versatility and flexibility to assure that students acquire understanding, knowledge, and skills that are transferable in a changing technology.

5. Vocational-occupational education should be considered part of the entire process of education and therefore should be concerned with all the capacities of an individual--intellectual, manipulative, social, and creative.

6. Education in school can at best provide only part of the total vocational competence of an individual, shortening and making more effective pre-job and on-the-job education by the employer.

Then would you consider the significance of these principles in relation to giving everyone an opportunity to learn about the varieties of pursuits within the health occupations, and developing a systematic approach to the preparation of larger numbers of technicians for the health field.

Since health education and preparation for the health services is of vital concern to our nation, I think we can say "business as usual" is passe'. The whole field of vocational education changing rapidly, but we must stop looking over our shoulder and thinking we are looking at the future in terms of health service and manpower.

Publications of
The Center for Vocational and Technical Education

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2	The Demand for and Selected Sources of Teachers in Vocational and Technical Education, State Directory. January, 1967. 31+[51] p.	*
3	Research and Development Priorities in Technical Education. May, 1967. 34 p.	*
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